1981

Audits of Airlines (1981); Audit and accounting Guide

American Institute of Certified Public Accountants. Civil Aeronautics Subcommittee

AICPA
American Institute of Certified Public Accountants

INDUSTRY AUDIT GUIDE

AUDITS OF AIRLINES

PREPARED BY THE CIVIL AERONAUTICS SUBCOMMITTEE

NOTICE TO READERS

This audit guide presents recommendations of the AICPA Civil Aeronautics Subcommittee regarding the application of generally accepted auditing standards to audits of financial statements of entities in the airline industry. The recommendations represent the considered opinion of the subcommittee on the best auditing practice in the industry and have been reviewed by members of the AICPA Auditing Standards Board for consistency with existing auditing standards. AICPA members may have to justify departures from the recommendations if their work is challenged.

This audit guide also includes descriptions of specialized accounting and reporting principles and practices for the airline industry. The descriptions may refer to an FASB statement or interpretation, an APB opinion, or an accounting research bulletin, all of which are pronouncements enforceable under rule 203 of the AICPA Code of Professional Ethics. Although this guide does not have the authority of those pronouncements, it is intended to be helpful in determining whether financial statements are in conformity with generally accepted accounting principles. Statement on Auditing Standards No. 5, *The Meaning of "Present Fairly in Conformity With Generally Accepted Accounting Principles" in the Independent Auditor's Report*, identifies AICPA guides as sources of established accounting principles that an AICPA member should consider.

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American Institute of Certified Public Accountants
1211 Avenue of the Americas, New York, N.Y 10036

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Preface

This audit guide has been prepared to assist the independent public accountant in conducting examinations of financial statements of airlines. The guide describes conditions and procedures that are unique to the industry and illustrates the form and content of airline financial statements and informative disclosures pertaining to such statements. This guide is intended not to codify preferable accounting practices but, rather, to summarize the practices presently being followed by the industry.

Since the deregulation of the airline industry, many new carriers have been entering the field, primarily at the commuter service and regional level. This guide should help these new entrants to gain an understanding of the industry's unique accounting practices and auditing considerations.

The Civil Aeronautics Subcommittee wishes to express its appreciation to Raymond Kurlander, director, Bureau of Carrier Accounts and Audits, Civil Aeronautics Board, and his staff for their assistance and support during the preparation of the initial drafts of the guide. Further, the subcommittee acknowledges the cooperation and assistance provided by the Air Transport Association of America.

Civil Aeronautics Subcommittee

September 1981

Chapter 1

The Airline Industry

Organization and Regulation of the Airline Industry

The United States first began promoting the airline industry through the adoption of the Air Mail Acts of 1925 and 1926, which transferred the carriage of mail from the U.S. Post Office to private carriers. Previously, though there had been interest in the development of military aircraft, private carriers had been unable to generate profits in substantially cargo-related efforts. After passage of the Air Mail Acts, growing demand, created by a small but competitive airline industry, stimulated the production of aircraft specifically designed for passenger and cargo service.

The airline industry continued to grow despite the depression of the 1930s. Technological developments and a new network of lighted airports with reliable communication equipment created the environment for industrial growth. In 1938 the Civil Aeronautics Act provided government regulation of market entry and exit, air safety, and rates.

World War II stymied airline industry growth, since military demands limited the amount of equipment and service that was available for civilian passenger service. However, military developments in aviation produced many improvements that were to result in more efficient and affordable service.

Jet service was introduced in the late 1950s. Subsequent technological advances and improvements resulted in an increase in property and equipment investment by certificated route carriers from $364 million in 1950 to over $12 billion in 1979.

Characteristics

The major classifications of direct carriers in the airline industry are certificated scheduled (route) carriers, certificated nonsched-

uled (charter) carriers (known as supplemental airlines before the Airline Deregulation Act (ADA) of 1978), Section 418 all-cargo carriers, air taxi operators, and intrastate air carriers. It is possible, however, for an airline to fit into more than one of these classifications.

Within the route carrier classification, airlines are identified as trunk carriers, regional carriers, local service carriers, and others. Trunk airlines primarily provide domestic scheduled passenger service between medium and large air traffic hubs. Originally, local service carriers operated short hauls within a specific geographical region; however, as the industry grew, local service airlines expanded into long-haul markets, some of which extend almost across the continental United States. New entrants operating in specific geographical areas were not comparable with the carriers classified as local service; thus, a new category, called regional carriers, was established.

Originally, certificated nonscheduled carriers operated charter flights to supplement scheduled service, but demand for charters has grown. In the deregulation act nonscheduled carriers are referred to as *charter* instead of *supplemental* to reflect the fact that they now offer a competitive alternative to scheduled operations.

Authority granted under Section 418 of the Federal Aviation Act permits a carrier to provide all-cargo air service in the forty-eight contiguous states, Puerto Rico, and the Virgin Islands.

Air taxi operators are exempt from certification as long as they maintain a minimum liability insurance coverage and do not use large aircraft. To receive the exemption, an air taxi must register under the provisions of Part 298 of the Civil Aeronautics Board's economic regulations. Within the air taxi operator category, those carriers that perform at least five round trips per week between two or more points and publish flight schedules or carry mail under contract with the U.S. Postal Service are called commuter air carriers. Although by definition an air taxi does not operate large aircraft, some air taxi operators have been granted exemptions to operate under the air taxi regulations using large aircraft.

Although the Airline Deregulation Act gave the Civil Aeronautics Board (CAB or board) jurisdiction over all interstate air carriers, the board does not have authority over air carriers that provide solely intrastate air transportation, although these are very few in number. Carriers that operate solely within one state but that carry interline passengers from interstate carriers are considered interstate carriers. Thus, there are very few, if any, intrastate carriers today.

Once an air carrier holds interstate authority from the board, the states and their political subdivisions may not regulate their rates, routes, or services.

International Air Transportation

Air operations between two countries are usually governed by specific bilateral agreements between those two countries.

The International Air Transport Association (IATA), a voluntary organization of international air carriers, was established in 1946 to negotiate international air fares, cargo rates, conditions of service, and ancillary matters. The Federal Aviation Act requires that U.S. carrier participation in such an organization be approved by the Civil Aeronautics Board. In 1946 the board granted U.S. carriers immunity from antitrust laws, permitting them to participate in IATA conferences for the purpose of establishing fares and rates.

Any agreement reached by the carriers at these meetings is subject to CAB approval. After the board grants approval, tariffs are filed to implement the approval.

In view of the movement toward greater competition in domestic air transportation, the board is reviewing its 1946 approval of U.S. carrier participation in the IATA.

Recently, the IATA has established two types of carrier participation: one that deals with facilitation matters and is mandatory for all members and another that sets fares and rates for air transportation. Participation in the latter type is optional, but a member that chooses to participate in fare and rate conferences must do so for all areas it serves.

Air Transport Association of America

Founded in 1936, the Air Transport Association of America (ATA) is a trade and service organization representing member U.S. scheduled airlines. The joint interests of the airlines as an industry are expressed through a system of councils and related committees on which airline and ATA representatives work together.

The ATA is divided into nine departments:

- Operations and airports
- Traffic services
- Office of enforcement
- Economics and finance
- International affairs

- Legal
- Federal affairs
- Public affairs
- Public relations

Besides being involved in the nine areas of general responsibility, the ATA provides several industry accounting services. These services involve four functional activities: corporate accounting, revenue accounting, agency accounting, and internal auditing. They are performed by the ATA staff working through the economic and finance council and its committees. This council and its committees are composed of airline personnel in various areas of expertise who develop basic recommended positions, policies, and procedures for the ATA.

In the corporate accounting area, efforts center on developing airline industry positions on numerous accounting issues. Whether the issues arise from day-to-day activity, exposure drafts, or proposed rules, the ATA staff develops industry positions and communicates them to the regulatory or legislative bodies. Once these issues evolve into regulatory rules, the ATA staff develops the necessary industry policies and procedures.

With respect to revenue accounting, the ATA, through the revenue accounting committee and the Airlines Clearing House, Inc. (ACH), develops standard methods and procedures for the settlement of interline passenger and cargo transactions. To facilitate the process, the airlines settle their interairline receivables and payables through the ACH, utilizing sampling techniques derived at the ATA. These techniques allow the airlines to process millions of dollars of transactions by sampling only a small percentage of the actual documents. In addition, the ATA publishes a survey of airline passenger origin and destination information, which is collected and processed by the CAB, based on a sample of the used coupons.

Since travel agent sales account for a significant portion of the airline business, the ATA designed the Area Settlement Plan (ASP). The plan enables each independent travel agent to submit one sales report to an area processing center, which then distributes the agent's sales and receivable transactions to the respective carriers. Because of the dollar volumes involved, the ASP program requires continuous monitoring and updating, a service provided to the airlines and their agents by the ATA.

In addition to establishing policies, operating clearinghouses, and administering agency programs, the ATA is responsible for coordi-

nating the internal audit of these functions. While the bulk of the effort is focused on industry-owned organizations and processing centers, the ATA members also audit independent fueling companies, combined sales offices, industry publishing houses, and travel agents.

Commuter Airline Association of America

The Commuter Airline Association of America (CAAA) is the national association of member airlines that are engaged in scheduled air transportation of passengers and cargo in local, feeder, and short-haul markets throughout the United States and its territories. The CAAA works with governmental and other organizations for the benefit of the public and the airline industry.

The association's finance and accounting committee has developed a uniform system of accounts tailored specifically for commuter airline use. This system was patterned after the CAB's financial accounting and reporting system for certificated air carriers.

Regulation and Deregulation

The airline industry is regulated in three major areas: market entry and exit, rates, and air safety. All three areas of regulatory responsibility came into existence with the Civil Aeronautics Act of 1938. The act created the Civil Aeronautics Board, whose primary duty, until amended by the Airline Deregulation Act in 1978, was to promote and regulate the airline industry. The board's current mandate is twofold: to maintain the highest priority for safety and to encourage competition in the airline industry. The key elements of deregulation are freedom of market entry and exit and freedom of pricing. A third element is protection of service to small communities.

In addition to liberalizing the general provisions for awarding certificates, the ADA established new provisions for automatic market entry, issuance of unused or dormant authority to carriers that will commence service, and issuance of experimental certificates for a temporary period. Other provisions ease restrictions on suspension and reduction of service and expedite both entry and exit by simplifying procedures for disposing of certificate applications. The board will cease to determine whether proposed domestic service is consistent with the public convenience and necessity on December 31, 1981. The board will continue to determine an applicant's fitness until January 1, 1985.

On January 1, 1983, the board's authority over domestic fares expires. Until that time the deregulation act creates a zone of reasonableness for passenger fares within which the board may not suspend fares unless they are found to be predatory. Before the deregulation act, the board could suspend a fare because it was unjust or unreasonable, discriminatory, unduly preferential, or unduly prejudicial.

The deregulation act also established a new subsidy program and required the board to guarantee for ten years "essential air service" to all communities in the United States that are named in the certificates of one or more airlines.

Civil Aeronautics Board Audit Function

The thrust of the board's audit function is to provide professional accounting and audit support in connection with financial reports and documents filed (1) by applicants for certificated authority in the determination of their initial fitness to operate and (2) by existing air carriers as evidence of their continuing fitness to operate safely and in a manner that will not be adverse to consumers. The objectives of field examinations are (1) to verify that the financial data submitted by the applicant to satisfy its evidentiary burden is reliable and fairly presented and (2) to develop a body of knowledge about the carrier's financial condition, operational capacity, compliance attitude, and consumer relations that will help the board to discharge the continuing-fitness mandate in Section 401(r) of the deregulation act.

Another major application of the board's audit resources supports the administration of subsidies under Section 406 of the ADA, "Rates for Transportation of Mail," through the end of 1985 and, concurrently, the new Section 419, "Small Community Air Service Guaranteed Essential Air Transportation," which guarantees continued air transportation in all eligible markets for ten years. (See chapter 4 for further discussion.) Since federal subsidies require accountability, the board's audit function is designed to verify that the costs, revenues, and operating statistics used by applicants for subsidy under Sections 406 and 419 of the ADA represent reliable accounting data. The board's audit objectives for the examinations of carriers claiming subsidy for providing essential air service to small communities are (1) to establish that the service was performed as required and that the traffic statistics submitted by the carrier are reliable, (2) to substantiate that the costs are fairly presented for the periods and services covered by the subsidy, and (3) to evaluate any

financial and statistical trends considered in establishing subsidy rates.

One standard procedure included in the CAB audit program is review of selected CPA working papers as authorized by the carrier. The aim of such a review is to develop confidence in the work done by the CPA and, as a result, to expand the board's reliance on the carrier's financial statements and to minimize coverage by the board's auditors.

Photocopying of CPA audit working papers is discouraged, since this practice can lead to a freedom of information request, which may result in disclosure of details that the carrier or the CPA may consider confidential. (See SAS No. 32 and the AICPA Code of Professional Ethics.)

Ratemaking Before and After Deregulation

Before enactment of the Airline Deregulation Act of 1978, the CAB approved or rejected air carriers' fares on the basis of the *Domestic Passenger Fares Investigation* (DPFI). Under the DPFI method for ratemaking, two carriers flying the same route would charge about the same fare (with differences in service accounting for variations in price).

Since July 1, 1979, an air carrier is permitted to raise its fare 5 percent higher or reduce its fare 50 percent lower than the standard industry fare level for essentially the same class of service. At least twice a year the standard industry fare level will be increased or decreased by the percentage change from the last period in the actual operating cost per available seat mile. Interstate and overseas transportation are combined for calculating this adjustment. The new method for ratemaking provides for flexible pricing; that is, two carriers flying over the same route may have significantly different tariffs in effect at one time.

The board's authority for ratemaking ceases on January 1, 1983.

Air Safety

The Air Mail Acts introduced the first federal legislation dealing with air safety, though the 1938 Civil Aeronautics Act delegated responsibilities to a separate federal body—the Air Safety Board. In 1958 the Federal Aviation Act delegated air safety to the Federal Aviation Agency. Today the Federal Aviation Agency exists as the Federal Aviation Administration (FAA), which is an operating body of the Departn ent of Transportation.

Air safety regulation takes many forms and includes such regulatory measures as pilots' qualifications, continuing flight training programs, aircraft maintenance requirements, and review of aircraft safety in design, manufacture, and operation.

Unionization

Labor relations are obviously a significant factor in the administration of an airline, since the existence of several unions per carrier means that contract negotiations are constantly in progress. Airline industry employee unions are governed by the Railway Labor Act, which permits Congress to intervene in the negotiation or settlement of strikes that create a national emergency by threatening to cripple the transportation industry. Under terms of the Railway Labor Act, contract employees may not walk out at the expiration of a contract. Negotiations begin before expiration and continue until a settlement is reached or until an impasse develops. In the event of an impasse, an outside arbitrator from the National Mediation Board may be called in to continue negotiations. Union members may call a strike after negotiations become deadlocked.

Aircraft Investment

The airline industry is characterized by substantial aircraft investment. The demand for air transportation generated by the economies of scale introduced by the jet engine is predominantly responsible for the increase in such investment since 1950. For example, the jet aircraft introduced in the late 1950s cost approximately $5 million while 1980 jets may cost as much as $50 million. Investment costs have also increased as a result of technological advances and the inflationary trends of the late 1960s and 1970s.

Because of traffic projections and lengthy production schedules, most airlines acquire air fleets over a number of years. The large manufacturers typically require progress payments during the manufacturing period, which are funded on a contractually agreed-upon basis, usually with balloon payments upon delivery.

Historically, most aircraft replacement has resulted from obsolescence due to technological advances and not from physical deterioration. The foreign and intrastate carriers and the smaller certificated carriers have been a market for used aircraft.

With higher operating costs offsetting most of the efficiencies created by the technological improvements of the 1960s and the

early 1970s, the industry has attempted to make existing fleets more efficient through reconfigurations of passenger compartments to increase seating capacity.

Capital Infusion

The rapidity of technological advances and the substantial plant and equipment investment needs have created large capital requirements, which cannot be met by internal funding alone. Cyclical earnings also hamper the ability of some airlines to raise money through equity issues, and this has increased reliance on debt financing. Three forms of debt financing predominate: revolving credit agreements, leasing, and debt issues. The large amounts of debt that are characteristic of the industry make interest a major component of fixed cost. Interest costs must be covered in determining adequate yield factors.

Maintenance Requirements

Maintenance requirements are dictated by the highly sophisticated nature of the industry's equipment. Airworthiness used to be determined by flight-hour time constraints, but individual carriers now use studies based on actual experience to demonstrate airworthiness to the FAA.

Most carrier maintenance is provided in-house, requiring maintenance facilities outfitted with specifically designed equipment. Although equipment is usually available from the manufacturer, most large air carriers have found that it is more economical to design and construct their own testing equipment; this requires engineering departments and technical machinists. Some forms of maintenance—especially on engine cores and sophisticated electronic navigational equipment—are performed by outside facilities under contract.

Supporting maintenance equipment costs typically approximated as much as 12 to 13 percent of the combined property and equipment of the certificated air carriers in 1979. Maintenance costs in 1979, both direct and indirect, represented as much as 13 percent of the combined operating expenses of the certificated route air carriers. Maintenance costs predominantly comprise labor costs, which have increased with inflation.

To provide more efficient maintenance, some air carriers have entered into pooling agreements. Pools of materials and parts are

maintained separately by the individual carriers and made available to other carriers as required. Benefits result from reduced inventory requirements.

Terminal Facilities

Local governments play a major role in air transportation by financing, owning, and operating terminal facilities necessary for air travel. Generally, the cost of landing and terminal facilities and their maintenance is reimbursed by the air carriers through landing fees and charges for terminal facility rentals. In some cases, air carriers initially fund construction and modifications and are later reimbursed from proceeds of bond issues and/or rental credits.

Local governments place maintenance and construction responsibility with agencies or authorities within their taxing districts.

Historically, carriers have informed government authorities of their facility needs; more recently, however, the authorities have proposed construction and terminal modifications and have submitted their plans to technical committees composed of representatives of the servicing carriers.

Airline Organization

Division of Responsibility

Airlines can be organized under several major divisions. The number of divisions and their specific responsibilities vary from airline to airline, depending on the size of the airline and management's objectives. Each division is the responsibility of a manager who reports directly to the chief executive or operating officer, who in turn is responsible to the board of directors. Each division has several subdivisions, which report to the division manager.

The following are examples of divisions and their responsibilities:

Division	*Responsibilities*
Finance	Treasury, controllership, and, possibly, purchasing and supply functions.
Flight operations	Flight crew administration and flight personnel training and scheduling.
Industrial relations	Labor relations and contract negotiations.
Maintenance and engineering	In-house maintenance of aircraft communication equipment and aircraft line service; production and quality control.
Computer services	Data management system design and implementation.
Marketing	Passenger and cargo marketing, passenger services, flight schedules, tariffs, and advertising and sales.

Regulations and Reporting

Air carrier accounting information is controlled by a Uniform System of Accounts and Reports (USAR), issued by the CAB, which all certificated air carriers must follow. The USAR consists of a list of titles and account numbers to be used, together with instructions for the use of individual accounts. The board's policy is to conform its accounting requirements to generally accepted accounting principles.

Financial data and reports must be filed with the CAB on Form 41 monthly, quarterly, and annually. Published financial reports usually follow the wording and captions of the USAR accounts.

For reporting purposes, the financial statement presentation of an airline organization is similar to that of other commercial enterprises. The USAR provides for the grouping of revenues and expenses by both objective and functional activity and for varying detail information, depending on the accounting requirements and the capacities of the air carrier. Generally, the income statement presentation is divided among operating revenues, operating expenses, nonoperating income and expense (net), income taxes, and net income.

The functional classifications for revenues are basically divided among transport revenues, public service revenue, and transport-related revenues. Transport revenues include all revenues for air transportation provided to all classes of traffic; they are broken into subclassifications for scheduled and nonscheduled services. Public service revenue is federal subsidy. Transport-related revenues result from services that are incidental to air transportation, such as liquor sales, sublease income, and maintenance work performed for other airlines. Maintenance work for other airlines becomes nontransportation revenue if it exceeds one percent of transport revenues.

The functional classifications for operating expenses are based on the type of activity or service rendered. Essentially, operating expense functions fall into eight major categories, represented by the following captions on the airline's statement of income for financial reporting purposes:

Classification	*Expenses Included*	*Major Items*
Flying operations	In-flight operations and holding of aircraft (except depreciation) and operational personnel in readiness for assignment to an in-flight status.	Fuel, flight personnel (except flight attendants) payroll, and employee benefits.

Classification	*Expenses Included*	*Major Items*
Maintenance	Direct and indirect expenditures for repair and maintenance.	Labor, material, outside services, and general or overhead expense allocations.
Passenger services	Expenditures relating to comfort, safety, and convenience in flight and during delays.	Personnel and flight attendants' payroll and passenger food and supplies.
Aircraft and traffic servicing	Compensation to ground personnel and other expenses incidental to the protection and control of in-flight aircraft movement, handling and servicing while in operation, scheduling and preparation of operational flight crews for assignment, and handling of ground property and equipment.	Payroll costs and employee benefits; general services purchases; and servicing supplies, landing fees, and facility rentals.
Reservations, sales, and advertising	Outlays to create a public preference for an air carrier, to stimulate the development of an air transportation market, or to develop air transportation in general.	Passenger handling and traffic solicitations, payroll and benefits, travel agent commissions, and advertising.
General and administrative	Expenditures of benefit to more than one operating function.	Record-keeping and statistical personnel, federal excise and state taxes, stationery supplies, etc.
Depreciation and amortization	Depreciation of operating property and equipment and amortization of intangible assets.	Depreciation of flight equipment, maintenance equipment, and ground property; amortization of developmental and preoperating cost; and capitalized leases.
Transport-related	Costs relating to generation of transport-related revenues.	Liquor, maintenance for other carriers, and costs of subleases.

Chapter 2

Accounting and Auditing in an Airline Environment

Accounting Environment

Many airline activities are unique, and, as a consequence, several internal accounting controls are peculiar to the industry.

The Revenue Cycle

The most unusual characteristic of the airline industry is its revenue cycle. Sales may be made at numerous locations by either the carrier or third parties (travel agents or other carriers); for some carriers, third parties handle a substantial portion of the ticket transactions. Tickets sold are not necessarily used, in whole or in part, on the carrier making the sale, and tickets are generally refundable if not used by the customer for up to one year after the sales date. The determination of revenue earned may be decidedly complex, particularly for larger carriers.

Accordingly, controls over the following areas are very important:

- Unused ticket stock.
- Ticket sales, particularly sales by travel agents or other third parties.
- The passenger boarding process and lifting of flight coupons.
- Settlements between carriers—either through interline clearinghouses or directly between the involved parties—for providing travel services on tickets sold by other carriers.
- Ascertaining that the correct fares have been charged.

A discussion of the specific accounting controls and auditing procedures for these areas is contained elsewhere in the guide.

Inventories

The inventories in an airline operation are for internal consumption and not for sale; they therefore differ substantially from the classical definition. Inventories in an airline operation comprise primarily expendable (spare) parts and materials and supplies used in the airline's operation. Such inventories are valued at cost, less an allowance for obsolescence that corresponds to the lives of the related fleets.

Fixed Assets

A major portion of an airline's fixed assets comprises aircraft and other flight equipment. Because such assets are constantly changing locations, the responsibility for physical custody and control of aircraft is substantially different from that of nonmobile fixed assets. (It should be noted that all aircraft are registered with the Federal Aviation Administration.)

Subsidies

An airline may receive revenues from the U.S. government for providing transportation of mail, for the performance of guaranteed essential air service to small communities, and for losses incurred in forced service. (See chapter 4 for further discussion.)

Overhaul

As a result of overhaul requirements established by the FAA, aircraft airframes and engines must be overhauled within specific intervals. The value (and usefulness) of an aircraft is heavily dependent on its stage of overhaul.

Revenue Recognition

Airline tickets usually are sold in advance of the transportation date, and the ticket sales date usually does not coincide with the revenue recognition date (the date that service is provided). Revenue recognition procedures are generally complex in the airline industry as a result of the volume of transactions to be processed; the multitude of fares that may be available for the same service; and the possibility that one or more segments of a flight may be on another airline, requiring the fare to be prorated between airlines.

Flight Compensation

Compensation of flight personnel usually represents a significant portion of an airline's operating expenses. The amount of compensation is generally dependent on a number of variables, including, among others, flying status, type of equipment flown, hours flown, whether flights are made during the day or at night, and employee seniority.

Decentralized Operations

The operations of an airline are, by necessity, decentralized. Substantially all aspects of airline operations are performed at the various station locations, which extend throughout an airline's route system. For most airlines, however, most accounting functions (recording of revenues, disbursements, revenues, and so on) are controlled and centralized at one location.

Potential Problems

In addition to understanding the unique aspects of the airline industry, the auditor should be aware of potential problem areas that may exist in a company engaged in airline operations. Such areas may include the following:

- Unreported ticket sales, which can result from delays or from lack of controls surrounding the matching of tickets lifted with tickets sold.
- Expenses incurred at the local level in the pursuit of passenger service, including meals, transportation, and accommodations of various kinds for both scheduled and delayed passengers.
- Commissions, authorized or unauthorized, on sales of aircraft in foreign countries.
- Improper commissions or unauthorized payments to travel agents.
- The risk of ticket exchange transactions, whether authorized or unauthorized, and similar arrangements that are inherent in a business devoted to the sale of an attractive but perishable commodity.
- The failure to act properly or promptly on audit findings, including those of internal auditors and regulatory agency auditors.

Internal Accounting Controls

Statement on Auditing Standards No. 1, issued by the American Institute of Certified Public Accountants, describes internal accounting control as follows:

> *Accounting control* comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and the reliability of financial records and consequently are designed to provide reasonable assurance that:
>
> a. Transactions are executed in accordance with management's general or specific authorization.
> b. Transactions are recorded as necessary (1) to permit preparation of financial statements in conformity with generally accepted accounting principles . . . and (2) to maintain accountability for assets.
> c. Access to assets is permitted only in accordance with management's authorization.
> d. The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

The auditor's responsibility for studying and evaluating the system of internal accounting control is established by the second standard of field work of generally accepted auditing standards, which states, "There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted."

Overall Control Environment

The independent auditor should consider the following factors, which may be present and can affect his examination:

- An effective organizational structure with clearly defined management responsibilities.
- Detailed procedural manuals to control field (station) operations and purchasing or procurement operations.
- A comprehensive budgeting process with close monitoring of variations between the budget and actual results.
- An effective internal auditing function.
- Competence and integrity of personnel.

Internal Auditors

Although not unique to the airline industry, an internal audit group may be an integral factor to be considered by the auditor in his evaluation of internal control. Although internal auditors are not part of internal accounting control in the same manner as an individual who checks the mathematical accuracy of all invoices, they act as a separate, higher level of control to determine that the system is functioning effectively. The control aspects of the internal audit function are of special importance, particularly to airlines with numerous airport (station) locations and city ticket offices, because in many cases the airline's internal audit group may conduct audits of stations on a regular basis.

The independent auditor should review the internal auditors' activities before establishing his audit plan. While smaller carriers with a limited number of station locations may not have an internal audit function, the cost/benefit relationship of an effective internal audit function should be considered. As part of his examination, the independent auditor should develop and maintain an awareness of the internal audit department's activities, since its work can have an important bearing on the assessment of internal control and on the nature, timing, and extent of audit procedures. (See SAS No. 9, *The Effect of an Internal Audit Function on the Scope of the Independent Auditor's Examination.*)

Regulatory Agency Auditors

According to section 902(f) of the Federal Aviation Act, information obtained during the course of an audit by the CAB may not be released to the public unless the board so directs. When circumstances dictate, the board's auditors send a letter requiring or recommending corrective action. Any such communications from CAB auditors during the current year should be considered by the independent auditor for possible audit implications. (See chapter 4.)

Electronic Data Processing

Because of the volume and complexity of transactions associated with airline operations, the auditor can expect to encounter the use of EDP equipment, ranging from smaller carriers' limited use through service bureaus to extensive use of sophisticated EDP applications with a variety of equipment types. Airlines may use batch processing systems, on-line systems, or minicomputers. The

types of applications that the auditor may encounter in the airline industry include

- On-line information systems that may allow third-party access to the system.
- Sales audit applications, including matching of passenger tickets lifted with tickets sold, testing of fare computations and any applicable commissions, and segregating and billing of interline transactions.
- Inventory systems to control and segregate rotable and expendable parts.
- Revenue applications utilizing sophisticated statistical sampling techniques to determine earned revenue.
- Payroll applications to effectively control and prepare complex flight payrolls.

(See chapter 3 for further discussion.)

The objectives and characteristics of internal accounting control do not change with the method by which data are processed, and the objectives of the auditor's review of internal accounting control are the same whether or not EDP is used. Attention is directed to the AICPA audit and accounting guide entitled *The Auditor's Study and Evaluation of Internal Control in EDP Systems*, which was designed to assist the auditor in meeting the requirements outlined in Statement on Auditing Standards No. 3, *The Effects of EDP on the Auditor's Study and Evaluation of Internal Control.*

Station Locations

Each station location is responsible for providing substantially all aspects of airline operations. While most accounting functions for the stations are performed at a central location, all of the stations located throughout an air carrier's route system are responsible for performing, in whole or in part, most of the following functions:

- Ticket sales, reservations, and control of unused tickets.
- Collection of proceeds from ticket sales, including compliance with approved credit policies.
- Control over passenger boardings.
- Approval or control of local expenditures, including payroll, passenger food, landing fees, fuel, passenger refunds, and special expenses for delayed flights.

- Aircraft maintenance.
- Custody of inventory and fixed assets.
- Collection of certain incidental revenues, such as in-flight liquor sales.

The extent and degree of controls may vary, primarily with the size of the stations. Adequate segregation of duties may not be practical at smaller stations.

Because a substantial portion of an air carrier's sales may be made at the stations, which approve or control a variety of expenditures, the independent auditor is concerned with the control procedures in existence at the station locations. The auditor should obtain a copy of the standard procedures manual, which should be available at the station, and should become familiar with the procedures to be followed. As part of his examination, the auditor should evaluate the adequacy of controls at the station locations, as well as the home office's controls over station operations.

Analytical Review

Statement on Auditing Standards No. 23, *Analytical Review Procedures*, provides guidelines for the auditor to consider in his application of analytical review procedures. SAS No. 23 states that "analytical review procedures are substantive tests of financial information made by a study and comparison of relationships among data," including comparisons to forecasted results, prior-year results, and industry performance. One purpose of the auditor's analytical review is to identify, through the deviation from expected patterns or results, those areas or items that the auditor should investigate further. The investigation normally consists of obtaining explanations from management, which the auditor then evaluates, relying on his knowledge of the company and the industry and other information already obtained during the conduct of the examination, some of which may require corroboration.

The auditor typically emphasizes the comparison of financial information with anticipated and prior-year results. The auditor also studies the relationship of financial and nonfinancial data by focusing on operational statistics developed independently of the accounting process and their relationship to current accounting data. It is this aspect of analytical review procedures, as it pertains to the airline industry, that this section will address. The common

nonfinancial statistical data will be defined, and their uses will be described.

The airline industry lends itself very readily to analytical review in both the operational and financial areas. This is particularly true for the larger carriers, for which statistical data is very useful. Through the study of certain operating data and statistics, the auditor can consider revenue trends, aircraft efficiency, capacity utilization, labor productivity, unit costs and profitability, and return on investment.

Various units of measurement may be used in performing analytical review procedures—such as cost per unit, physical quantities, ratios, or percentages. The data can be found in the carrier's monthly financial statements and operating reports and, with additional details, in periodic reports filed with the CAB. Similar data for the industry and other carriers are available from the CAB and the ATA.

Using these sources, the auditor can extract or derive key operating data and statistics, such as yield, load factor, break-even load factor, aircraft utilization hours, and fuel burnout (consumption).

The available comparative cost data from independent public sources is a powerful tool for the auditor. Using data from such public sources as the CAB and ATA, the auditor can perform tests of the cost levels of the airline. He can increase his confidence in the costs being reported by comparing them with those of other airlines. Items of comparison might include depreciation lives of aircraft and fuel costs.

Certain operating statistics are used universally within the airline industry. They provide an indication of the carrier's operations and are used to derive other barometers of performance. (See the glossary for definitions.) Among these are

- Available seat miles (ASMs)
- Available ton miles (ATMs)
- Average flight segment length
- Block-to-block aircraft hours
- Break-even load factor
- Cargo ton miles (CTMs)
- Load factor
- Mail ton miles

- Revenue passengers
- Revenue passenger miles (RPMs)
- Seat miles
- Yield

These statistics basically indicate how much capacity the carrier provides and how much is filled. However, relying on these statistics alone to assess a carrier's performance does not yield a meaningful evaluation. In attempting to use statistics and financial information to analyze the operations of a carrier, the auditor must recognize the complex interrelationship of the components of the carrier's operations. For example, while an increase in revenue passenger miles can signify a growth in revenue, the increase need not be proportional, due to such factors as fare discounts, route and segment lengths, and changes in the mix of passengers paying full fares versus discounted fares. Similarly, a change in available seat miles can result from the purchase of new equipment, a change in fleet mix (resulting from mothballing certain equipment and using alternate fleet types), schedule changes (resulting in a longer aircraft day or utilization period), or the reconfiguration of existing equipment by adding or removing seats.

By keeping these relationships in mind, the auditor can use statistical data effectively. To analyze the carrier's performance, the auditor can first look at load factor as an overall indicator of the strength of operations. Load factor is the percentage of revenue passenger miles to available seat miles in revenue passenger service, representing the proportion of aircraft seating capacity that is actually used. For cargo, it is the percentage of cargo revenue ton miles to available cargo ton miles.

While RPMs and ASMs can be influenced by many factors, an increase in load factor usually means that more revenue passengers are being carried and, therefore, more revenue is being earned (if there has not been a greater, offsetting decrease in yield). Furthermore, since the carrier is generally not incurring significant additional costs to transport or serve those additional passengers, it is receiving a greater contribution towards operating income.

A decreasing load factor usually indicates capacity in excess of market demand or a noncompetitive pricing, scheduling, or tariff structure. The carrier therefore transports fewer revenue passengers but still incurs the same fixed costs of providing service. Thus, the auditor will expect to see a decrease in operating income and

an erosion in the carrier's gross operating margin. While it is possible for a carrier to increase revenues with a decreasing load factor, such a situation involves operational decisions that are beyond the scope of this discussion.

The break-even load factor is a refinement of the load factor concept that examines the relationship of the revenues generated and the expenses incurred. The break-even load factor is the percentage of revenue passengers carried in scheduled revenue service that is required for scheduled passenger revenue less passenger traffic expenses to equal passenger capacity expenses.

This division of cost types does not strictly represent "fixed" versus "variable" costs as those terms are used in accounting literature. Capacity expenses are those expenses related to the provision of aircraft capacity, regardless of the degree to which that capacity is used. They include such cost elements as flying operations expense, maintenance expense, depreciation and amortization, and aircraft servicing expense. (Aircraft servicing expense is the total of all expenses incurred on the ground incident to preparation for aircraft arrival and takeoff, such as inspection and routine checking, fueling and servicing of aircraft, flight crew scheduling, and wages of ground personnel.) Traffic expenses are expenses that relate to, and may vary with, the traffic (passenger or cargo) transported. They include such cost elements as reservations and sales expense, food and beverage, and traffic servicing expense (all expenses incurred on the ground after the carrier has become responsible for providing air transportation, as evidenced by the boarding pass given to the passenger in exchange for his ticket).

The auditor can use the break-even load factor to review operating income and to investigate the cause of any significant changes in the gross operating margin. Splitting the statistic into its components will also allow the auditor to isolate operating expense variations.

In his analysis of operating expense variations, the auditor focuses primarily on two significant costs: salaries and wages, and fuel expenses. Because of the interaction of units of manpower or fuel and the price of the units, the most efficient way to examine these expenses is to use price and volume analysis. Such analysis simply seeks to explain the variation by breaking down the gross dollar amount into the change due to growth or decrease in units used (the volume component) and the increase or decrease in the price of such units (the price component). The change in certain

operating statistics—for example, scheduled departures, block-to-block aircraft hours (the hours from the moment an aircraft first moves under its own power until it comes to rest at the next point of landing, including taxi time before takeoff and after landing), gallons of fuel consumed, or number of employees—will indicate the increase or decrease in volume or units used. The price component is more important and may be expressed as average price per gallon or average wage or salary per employee. By using price and volume analysis, the auditor can better isolate the causes of cost fluctuations and obtain more meaningful explanations.

The auditor can analyze other operating expenses by developing statistics from financial and nonfinancial operating data for the purpose of making historical comparisons. For example, the auditor can look at overall changes in operating expenses by relating total operating expenses to revenue miles flown, total available ton miles, or available seat miles. If current-year results deviate significantly from historical patterns, additional detailed analysis may be warranted. In that case, the auditor may look at the relationship of aircraft servicing expenses to the total number of ground personnel or the relationship of traffic servicing expense to the total number of personnel in that function.

In analyzing flight operations expense variations, a useful bench mark is the number of block hours per day for the aircraft, because this measures how effectively the carrier is using its available capacity. As block hours per day vary, so do revenues and expenses. Many costs are directly related to the length of time the aircraft is in revenue service. For example, the auditor may analyze the change in the following ratios between years:

- Flight crew salaries and expenses/total block hours.
- Other flight personnel salaries and expenses/total block hours.
- Fuel and oil expense/total block hours.

These ratios can also be reviewed on a fleet-type basis for further refinement of variation explanations.

For other flight operation expenses, a more meaningful bench mark may be total hours flown, because certain costs are incurred on that basis, regardless of whether the aircraft is in revenue service. Using this measure, the auditor can derive the following ratios:

- Aircraft rentals/total hours flown.

- Flight equipment maintenance/total hours flown.
- Insurance/total hours flown.

Because a significant portion of passenger service expense varies with passenger traffic volumes, the following ratios are useful in explaining variations in that item:

- Flight attendants' salaries and expenses/revenue passenger miles.
- Passenger meal expense/revenue passenger miles.

The auditor can use other operating statistics to analyze other key expense items. He can divide landing fees (in total, by fleet type, or by station) by scheduled departures to obtain an average cost per landing. Or, he may analyze agency commission expense by determining what percentage of agency sales it represents and comparing the result with commission rates. In short, most operating expenses can be analyzed effectively through the use of nonfinancial statistics and data.

In an analytical review of revenues, the auditor should focus on an important statistic, which is the yield (the average revenue per unit of traffic carried in revenue service). It is usually calculated as average revenue per passenger mile, or cents per RPM. (For cargo, it is calculated as average revenue per cargo ton mile, or cents per CTM.)

Basically, yield indicates how well the carrier is pricing its product in a particular environment. While it does not bear a direct relationship to operating income, an increase or decrease in yield, if not offset by a corresponding increase or decrease in operating costs, can have a significant effect on income from operations. The passenger revenue yield for a carrier is the product of a mathematical calculation that is composed of three variables:

$$\frac{\text{Scheduled passenger revenues}}{\text{Revenue passengers enplaned} \times \text{average passenger trip lengths}} = \text{Yield}$$

Changing any one of the three variables will have an effect on the yield. Therefore, in its simplest form, a decrease or increase in yield can be attributed to one of three factors, assuming the other two factors are constant. Practically speaking, however, a change in yield results from a combination of factors. For example, as a

carrier raises or lowers its fares, the number of passengers will increase or decrease, depending on such factors as the elasticity of demand, competitive pricing and scheduling responses from other carriers (within CAB restrictions), and the availability of capacity to meet additional demand.

For purposes of illustration, assume that a carrier has one 200-passenger aircraft, which flies a 5,000-mile route. In the base case, there is one fare, $500, and the aircraft operates with 100 passengers on board. As certain variables (fare and passengers carried) are changed, the effect on yield will be as shown in exhibit 1.

EXHIBIT 1

Determination of Yield

Case	*Fare*	*Passengers Enplaned*	*Scheduled Passenger Revenues*	*Trip Length*	*RPMs*	*Yield ($/)RPM*
Base	$500	100	$50,000	5,000	500,000	.10
I	500	150	75,000	5,000	750,000	.10
II	400	100	40,000	5,000	500,000	.08
III	400	150	60,000	5,000	750,000	.08
IV	550	100	55,000	5,000	500,000	.11
V	550	90	49,500	5,000	450,000	.11

This simple illustration ignores two other factors that will also affect yield: change in trip length and incremental pricing. Incremental pricing, as used by carriers today, means the selling of seats that otherwise would have gone empty at a discount from the regular fare. If a carrier uses incremental pricing correctly (after evaluating its break-even load factor, among other items), it will obtain an additional contribution towards operating income, assuming that it has recovered its fixed costs with regular-fare passengers and that the discounted fare exceeds the carrier's traffic expense. The concept of covering fixed costs, and the resultant restrictions on the availability of discount fares, is the key to incremental pricing. Unrestricted discount fares not only would mean a decrease in yield but could also result in a decrease in revenues and a decrease in operating income. Applied correctly, discount fares will result in a decrease in yield, but the carrier

should experience an increase in overall revenues, with a favorable impact on operating income.

In explaining changes in a carrier's yield, the auditor must be aware of the effect of all these variables. These, in turn, can be linked to changes in business conditions, in the marketplace, and in consumer demand to provide a meaningful and business-oriented explanation of changes in yield.

Because many elements of a carrier's operations can be reviewed analytically, this discussion is not all-inclusive. Although the analysis of the data will need to be supplemented by inquiries and other procedures, the auditor can examine a carrier's financial statements more effectively and efficiently by increasing the use of such data within the guidelines of SAS No. 23.

Segment Information

Financial Accounting Standards Board Statement No. 14 (SFAS No. 14), *Financial Reporting for Segments of a Business Enterprise*, as amended, requires that the financial statements of publicly held business enterprises include information about the enterprise's operations in different industries, foreign operations, major customers, and export sales.

Operations in Different Industries

An industry segment is defined in SFAS No. 14 as "a component of an enterprise engaged in providing a product or service or a group of related products and services primarily to unaffiliated customers . . . for a profit." Airline operations are generally considered one business segment: air transportation, the common carriage of passengers, freight, and mail over routes authorized by the CAB. However, carriers may have operations within different industries, such as food service or hotels, which may constitute reportable segments under SFAS No. 14, and, if appropriate, the required disclosure should be made for these operations.

Foreign Operations

Foreign operations are defined in SFAS No. 14 as including "those revenue-producing operations . . . that (a) are located outside of the enterprise's home country (the United States for U.S. enterprises) and (b) are generating revenue either from sales to unaffiliated customers or from intraenterprise sales or transfers between geographic areas."

Although SFAS No. 14 requires certain companies to disclose foreign operations in their financial statements, airlines have been reporting similar information to the CAB on Form 41. The CAB currently requires air carriers to report earned revenues and related expenses by "entities." These entities are defined as follows:

- Domestic operations
- Operations via the Atlantic Ocean
- Operations via the Pacific Ocean
- Operations within Latin American areas

The CAB definition of foreign operations is based on international flights rather than on whether a revenue-producing operation exists in that geographic area. Footnote 12 of SFAS No. 14 addresses enterprises with mobile assets (for example, oceangoing vessels) and indicates that the determination of whether use of those assets constitutes foreign operations should depend on whether such assets are identified with operations located, and revenue generated from, outside the home country (the United States). A carrier with a flight to England has foreign revenue under the CAB definition, though it may not have "operations" in that country.

Many carriers classify airline operations (revenues and expenses) for segment disclosure as domestic or foreign operations on the basis of entity definitions prescribed in the CAB economic regulations.

Revenues

Under the CAB definition, revenues are classified among the entities on the basis of a flight's origin and destination. Exhibit 2 illustrates this classification.

Expenses

Certain expenses, such as flight payroll and fuel, may be directly attributable to an entity and are therefore directly charged to that entity. Other expenses, such as aircraft depreciation and maintenance expense, are allocated to the entities through the use of ratios, such as plane miles flown by entity to total plane miles flown, revenue passenger miles by entity to total revenue passenger miles, or some other measure of the total effort expended to produce the revenue.

EXHIBIT 2

Classification of Foreign Operation Revenues

Origin	*Destination*	*Entity*
Chicago	New York	Domestc
Chicago	London	Atlantic
Chicago	London (with stop in New York)	Allocate between domestic and Atlantic*
Chicago	Sao Paulo, Brazil	Latin America
London	Rome	Atlantic
London	Tokyo	Allocate between Atlantic and Pacific*
Tokyo	Chicago	Pacific

*The allocation of revenue between entities can be made by dividing the total fare on the basis of the ratio of plane miles flown, local fares, or some other logical method of splitting the fares.

Identifiable Assets

Similarly, certain assets, such as inventory and other ground facilities, may be directly attributable to an entity and therefore are identified directly with that entity. Other assets are generally used in more than one entity and therefore can be allocated to the entities by applying ratios similar to those used in the allocation of expenses.

Audit Considerations

Statement on Auditing Standards No. 21, *Segment Information*, provides guidance regarding auditing procedures when financial statements include information presented in accordance with SFAS No. 14. As noted therein, the tests of underlying accounting records normally applied in an examination of financial statements should include a consideration of whether the revenues, operating expenses, and identifiable assets are appropriately classified among different industry segments and geographic areas. For example,

- The test of the enterprise's revenue records should include procedures to test the classification and proration of revenue among the segments or entities.
- The test of the disbursements and payroll records should include

procedures to test the distribution of direct expenses to the various segments or entities.

- The test of fixed asset records should include procedures to identify those fixed assets that are directly attributable to a segment or entity.

Major Customers

In general, airlines that provide the public with common carriage of passengers and cargo do not meet the major-customer criterion set forth in SFAS No. 14. However, an air carrier that specializes in either charter service or cargo carriage may do a substantial portion of its business with one travel agent or with a governmental unit or authority. The auditor should be aware of this possibility and should determine whether appropriate consideration has been given to the need to disclose that 10 percent or more of the airline revenue is derived from a single customer or governmental unit. In this connection, reference also should be made to SFAS No. 30, *Disclosure of Information About Major Customers.*

Export Sales

With respect to an enterprise's domestic operations, SFAS No. 14 defines export sales as "sales to customers in foreign countries." However, as discussed under "Foreign Operations," many carriers use the entity definitions prescribed in the CAB economic regulations to classify revenues and expenses as domestic or foreign operations for financial reporting purposes. Therefore, export sales information is not a very frequent disclosure in the airline industry.

Chapter 3

Specific Accounting Principles and Auditing Procedures

Revenue Accounting

Airline revenue is derived primarily from the carriage of passengers, cargo, and mail. The objective of the revenue accounting system is to recognize revenue according to the principle, "Revenue is generally recognized when both of the following conditions are met: (1) the earning process is complete or virtually complete, and (2) an exchange has taken place."[1]

Since airline tickets usually are issued in advance of the scheduled transportation date, the ticket sales date seldom coincides with the revenue recognition date, also referred to as the service date. Therefore, the task for airline revenue accounting is twofold:

1. To record unearned revenue when a ticket is sold and scheduled service is at a later date.
2. To recognize revenue when the carrier provides the transportation service and thereby completes the earnings process.

Revenue recognition is a complex task within the airline industry. It involves the quantification for financial statement presentation of four major balances related to transportation revenues: earned revenue, unearned revenue, accounts receivable, and accounts payable. This process is complicated by the many fare types available (first class, coach, economy, joint, and various forms of discounts) and the possibility that one or more segments of a flight may be on another airline, requiring the total ticket fare to be prorated for each airline's share. The process is further complicated by the large volume of tickets to be processed.

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1. APB Statement No. 4, *Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises* (1970), chapter 6, paragraph 150.

Free and Reduced-Rate Transportation

Section 403(a) of the Federal Aviation Act requires carriers to file tariffs stating the rates charged for air transportation. Section 403(b) requires carriers to adhere to the rates stated in their respective tariffs. In spite of the tariff requirements, the second sentence in Section 403(b)(1) allows carriers to provide free or reduced-rate transportation to certain categories of persons. Carriers are thus relieved of the statutory requirements of filing and adhering to otherwise applicable tariffs when transporting these special categories of persons. Further, Part 223 of the board's economic regulations (14 CFR Part 223) exempts carriers from the tariff requirements of the act and expands the categories of persons eligible for free or reduced-rate transportation.

The independent auditor may refer to Part 223 of the board's economic regulations, including all amendments since the last audit, to determine the current list of persons eligible for free or reduced-rate transportation. Amendments may occur more often during the period of airline deregulation, when the board's policy is to give carriers greater flexibility in making day-to-day business decisions.

Free transportation is carriage of any person or property (other than property owned by the carrier) without compensation. Free transportation is provided to persons flying for in-flight technical purposes, such as air traffic controllers, airframe and aircraft engine manufacturers' representatives, certain postal service employees, and guards providing in-flight security. Reduced-rate transportation is carriage of any person or property (other than property owned by the carrier) for less compensation than that under the rate, fare, or charge published in the carrier's applicable tariff on file with the board.

Although airline accounting is based on the elements of gross revenue and expense, the full value for free and reduced-rate transportation is not recorded as revenue with an equivalent contra entry to an expense account. One reason for this is that free and reduced-rate transportation is generally offered on a space-available basis, which means that the space would not be generating revenue even if the free or reduced-rate passenger or shipment were not transported. If no revenue is collected, none is recorded. If a reduced rate is paid, the amount received is recorded in revenue.

Types of Revenue

Approximately 90 percent of operating revenues (excluding subsidies) is derived from passenger operations for certificated passenger carriers. Other operating revenue is derived from air cargo operations, principally air freight services, and mail services. Accounting for the paper flow is different for passenger and cargo operations. The primary emphasis of this chapter is on passenger revenue, since that is a carrier's major operating revenue. A brief section on air cargo, however, is included.

Ticketing Procedures

Tickets may be sold by airline ticketing agents at airports or other locations or by travel agents. Tickets may also be written by nonairline organizations using air carrier ticket stock from contracting airlines. Tickets may be paid for in cash, by check, by various credit cards, by government transportation request (GTR), or by the exchange of a previously purchased ticket.

A ticket for air transportation is similar to a negotiable instrument and may be issued weeks or months before the scheduled departure date. An unused ticket for a scheduled flight is not forfeited and may eventually be refunded, used on another carrier for the same itinerary, or rerouted and reissued for a different flight. Adjustments in fares between carriers for segments actually flown or additional charges to customers when discounts do not apply can arise in these circumstances. A ticket is usually valid for one year, with the specific period identified by a statement printed on the ticket.

An airline ticket consists of several coupons indicating the itinerary of the passenger. One copy is the *auditor's coupon*, which is the initial document used to record a sale. An additional coupon represents each segment (leg) of the passenger's itinerary. This coupon is lifted (detached from the ticket booklet) by the carrier providing the transportation service at the boarding point as evidence of the service rendered.

A ticket sold by an airline and ultimately used on that airline is referred to as an on-line (OL) sale; a ticket sold by one airline and used on another airline is referred to as an off-line (OAL) sale. One ticket can include several flight segments and, also, can include flights on various carriers. The carrier that issues the ticket collects the total fare from the passenger. Settlements of this fare are made

among the other carriers on the basis of interline agreements (described in a later section of this chapter). In this case, the selling carrier is known as the OL carrier, and all other carriers for which transportation is scheduled are the OAL carriers.

When a passenger ticket is sold and scheduled service is at a later date, the selling carrier uses the auditor's coupon to recognize cash received or accounts receivable, air traffic liability representing unearned revenue (for its share of the ticket), and accounts payable (for other airlines' shares of the ticket). The two sources of this sales information are station sales and travel agency sales.

Station Sales. A significant portion of an airline's operating revenue is generated through sales made at airport stations or other sales locations. Airlines also sell tickets via mail and telephone orders, usually from one central or several regional reservation centers. Sales from all locations (stations) are controlled and processed in a similar manner.

Each station normally reports sales and refund activity to revenue accounting on a daily basis. The reporting can be accomplished via on-line computer processing, with each ticket automatically priced, printed, and recorded at the station. Reporting can also be performed manually by the preparation of daily ticket sales reports, which classify sales by ticket number as cash or charge sales. Under both systems, deposit slips and auditors' coupons are then sent to revenue accounting for verification.

The carrier's audit of sales can commence when all documents are received at the revenue accounting office. The degree of this audit function—from zero to 100 percent—varies according to the airline's accounting policies and processing sophistication. The audit may include one or more of the following: verification of ticket number sequence, agreement of cash and charge sales with the sales reports, and, in some systems, ticket pricing and input of tickets into a sales file.

The accounting entry for station sales recognizes cash received and credit card receivables and the related commission, with corresponding credits to the air traffic liability and related transportation tax accounts.

Travel Agency Sales. A large portion of airline industry ticket sales is generated through travel agencies. Since there are so many agencies, an important aspect of revenue accounting involves the settlement of revenues due the airlines and commissions due the agencies. The processing of sales through domestic travel agents

and accounting for such sales are conducted under rules established by the Air Traffic Conference (ATC). Under the ATC guidelines, agency area settlement banks serve as the intermediaries between domestic travel agencies and airlines.

An agent indicates the airline to which the ticket sale is to be credited via the coding of designated or undesignated ticket stock. The agent also includes the tax and commission codes on the auditor's coupon. The agent submits auditors' coupons, credit card vouchers, miscellaneous charge forms, and checks, net of the agency commission, for amounts due the airline to the area settlement bank on a weekly basis.

The area settlement bank processes these documents and prepares invoices and reports necessary for settlement, including travel agency sales reports by airline and by agency, with the supporting auditors' coupons. The bank makes the settlement for the tickets sold by the agencies for those airlines with accounts at the bank. The bank also submits invoices and associated charge documents to the respective credit card contractors, who calculate the net settlement (for the credit card commission) and make direct payment to each airline.

Airlines use the summary reports from the bank to record sales activity and associated commission expense. The issuing airline initially records the total agency commission, but, once transportation is provided, the servicing airline incurs the commission expense. Batching and repricing of tickets for specific ticket entry into the sales system and for the accumulation of sales data are performed at this point according to the carrier's accounting policy and sophistication of processing. This sales input allows the airline to audit the travel agency product on a timely basis. Differences noted during the audit can then be charged back or credited to the travel agencies, with corresponding debits or credits to the air traffic liability clearing account and related transportation tax account.

The accounting entry for travel agency sales recognizes a receivable, net of the related commission, and a credit to the air traffic liability account. Some carriers recognize commission as a prepaid expense and credit this account when transportation service has been provided.

Air Traffic Liability

When a passenger ticket is sold, the selling carrier records a cash receipt or account receivable and unearned transportation

revenue. Air traffic liability (ATL) is the value of unused transportation sold by the reporting air carrier. This includes the liability for transportation to be provided by the carrier selling the ticket, as well as a liability for transportation that may be provided by other air carriers.

With the concurrence of the Air Traffic Conference, members are permitted by regulatory authority to establish procedures for handling such interline operations. The details for these procedures are set forth in two primary interline agreements: the IATA bilateral agreement and a multilateral agreement. Some airlines participate in both agreements. The agreements cover interline passenger ticketing, cargo, and baggage procedures, specify the source of accepted published fares and procedures, and describe the process of settling funds between participating airlines. The interline agreements are permitted in order to simplify the ticketing process for air travelers and to minimize the number of tickets necessary to complete an itinerary that involves more than one air carrier.

Under the interline agreements, the air carrier providing the first flight shown on a ticket for a multicarrier itinerary is allowed to issue a ticket for the entire trip. This is the preferred practice since the carrier that issues an interline ticket collects the total fare from the passenger. As a general practice, however, the carrier making the reservation issues the ticket even if it is the second carrier or does not provide any service. On the basis of the interline agreements, the selling carrier prorates the fare among the carriers providing service on the itinerary. The proration is a method of dividing the total fare among carriers according to either accepted published joint fares or cost factors applied to unpublished joint fares.

Thus, the value of the interline ticket recorded in the air traffic liability account represents both the issuing carrier's liability to provide air transportation to the passenger and its liability to other carriers for their share of the ticket sales. Although part of a carrier's air traffic liability account represents interline amounts payable to other air carriers, other air carriers are also issuing interline tickets that the carrier has an obligation to service. Also, the actual obligation between carriers is not established until the transportation service is provided. This is because a ticket can be used on different airlines and for flights different from those originally designated.

The carrier reduces unearned revenue in the air traffic liability

account and recognizes earned revenue from on-line sales when transportation service is provided. The basic methods of accounting and invoicing other airlines after transportation service has been provided are described in the "Interline Accounting" and "Revenue Recognition" sections of this chapter.

Interline Accounting

The main objectives of the carrier's passenger interline accounting department are to invoice other airlines for lifts of tickets that other airlines have issued and to audit interline payable billings from other airlines for lifts by those airlines that the carrier has sold. This department's processing function also develops data to be used in the recognition of revenue.

OAL lifts represent interline receivables and revenue because the tickets were sold by another carrier and the service was provided by the airline. This service has not been previously recognized in the airline's financial statements; therefore, the tickets must be processed to record revenue and to initiate interline receivable billings.

Flight coupons, which are collected and controlled at each boarding gate, provide the basis for processing interline receivables. All of the lifted documents should be cancelled and then transmitted to the revenue accounting office. An airline should have controls for the timely receipt of lifts that are by-products of systems established to meet the CAB's daily statistical reporting requirements (such as origin and destination, passenger counts, and revenue passenger miles).

OAL lifts must be assigned prices in order to create interline billings to collect earned revenue. Some airlines price all of these lifts; most perform this pricing from a lift sampling based on ticket number digits, as selected by the airlines, on a monthly basis. Pricing of tickets can be done manually, but for most fares it is done via computer processing systems.

To aid in billing interline receivables, the airline industry has established clearinghouse settlement plans in which most carriers participate. The settlement procedures are described in the interline agreements. Airlines Clearing House, Inc., performs this interline settlement function for most western hemisphere carriers, and the IATA Clearing House performs this function on a worldwide basis. Some airlines are members of both clearinghouses. Airlines transmit summaries of their interline invoices to

the clearinghouse, which tabulates accounts receivable and accounts payable for each member airline and reports the balance semimonthly to each member. The net balances are calculated monthly in U.S. dollars, Canadian dollars, or pounds sterling, and settlement is made through each participating airline's account at the Chase Manhattan Bank. Each airline is also responsible for preparing invoices that detail the airline billed and the amount of the invoice and that identify the tickets that were priced. The invoice, all lifted tickets, and, in most instances, magnetic tapes summarizing the pricing that was performed are sent monthly to the appropriate airline.

Each carrier is responsible for auditing the interline billings it receives. This audit is performed after the settlement through the clearinghouse. Any differences noted in the audit are rejected and rebilled to the appropriate carrier in subsequent months. The percentage of pricing for this audit (sampling or 100 percent) is a matter of airline choice. If a sample is used, the sampling method and size of sample is agreed upon by each airline clearing with the billing carrier.

Refunds and Exchanges

There are several types of refunds and exchanges that can be made for an airline ticket. They include refunds, reissue/even exchanges, reissue/refunds, and reissue/additional charges. If a passenger does not want to use a ticket and does not have an alternative itinerary, a refund is required. If a ticket is surrendered in place of another ticket, for a different route or for a different airline with the same fare, a reissue/even exchange is required. If a ticket is surrendered in place of another ticket with a lower fare, a reissue/refund is required. If a ticket is surrendered in place of a ticket with a higher fare, a reissue/additional charge to the passenger is required.

Refunds and exchanges can be executed at station locations, by travel agencies, by the airline refund department, or by other airlines. At a station, a refund draft, refund application, or additional charge is made, according to the type of exchange required. If a new ticket is written, the old ticket is collected from the passenger. The old ticket, the auditor's coupon of the new ticket, and refund drafts or refund applications are batched and submitted to revenue accounting with the daily ticket sales report documents. The revenue accounting department sorts such refund

documents, logs them in a control record, and sends them to refund accounting for pricing, auditing, and, if applicable, issuance of checks.

A travel agency that issues a refund or an exchange voucher reports such items, after subtracting the original commission, in the usual manner through the area settlement bank or directly to the carrier involved. When the revenue accounting department receives the documents, they are logged in and sent to refund accounting for processing. When tickets are sold by travel agents and refunded by another source, the travel agency must be charged by the airline for the commission involved.

Refunds and exchanges can also be requested directly from the refund department, which then audits and processes the requests. A refund department should maintain a check register and separate check stock for drafts written by the department. Most station locations also have a separate stock of drafts for passenger refunds.

If a carrier executes a refund or exchange for an OAL ticket, that carrier then bills the refund back to the OL carrier via the interline billing. This refund item is audited by the OL carrier as part of the interline payables audit; if any difference is noted, the item is rejected and rebilled.

An airline should list all refunds that it makes in a register, which is often prepared by on-line or keypunch processing, in order to track and control the documents. Such a listing is also used as input for a sales/match system of revenue accounting.

Refunds and exchanges are recorded in the air traffic liability account, in accounts receivable, and in cash accounts as part of the station, travel agency, and interline sales entries.

Revenue Recognition

Lifted flight coupons represent earned revenue, whether they originate as on-line or as off-line sales. On-line lifts indicate that one carrier has completed the sales cycle, both selling the ticket and providing the service. The carrier must process on-line lifts in order to determine the amount to be transferred from the unearned to the earned revenue account. Each OL coupon can be entered in a sales/lift match file if that is the method of revenue recognition used by the carrier. Such files range from a ticket number file to a detailed data history file for each coupon. Revenue may be determined by valuing each coupon lifted or by sampling the lifted coupons.

The carrier initially uses a sample of lifted coupons to obtain statistical data that must be submitted to the CAB. Lifted coupons are then sorted into off-line and on-line batches for different processing activities.

OAL lifted coupons represent revenue to the OAL carriers for the transportation service provided. If the carrier uses a sales/lift match system, the OAL lifts represent part of the credit entry to earned revenue. If the carrier uses a sampling method for recognizing revenue, off-line coupons must also be surveyed to determine the credit entry to earned revenue.

There are two basic methods for calculating earned revenue: the sales/lift match method and the sampling method.

Sales/Lift Match Method. The principal objectives of the sales/lift match method are to record all sales information by coupon and to match the usage of all recorded coupons. In this type of system, all OL coupons issued must be recorded in the air traffic liability account and tracked by ticket and coupon number. Lifted OL flight coupons are matched against the recorded coupons, and this usage amount is deducted from air traffic liability and added to earned revenue. Interline payable billings by other carriers also represent a usage of OL sales, which must be matched against the recorded coupons and deducted from the air traffic liability account. Adjustments to the unearned revenue account are made periodically for unmatched tickets, lost tickets, or tickets not processed for some other reason.

In such a system, OAL lifts are directly recorded as revenue. Since all tickets must be processed at the sales and usage points, this method is likely to require computer capacity to accommodate the large volume of processing.

Sampling Method. The objective of the sampling method is to recognize revenue on the basis of a survey of lifted off-line and on-line coupons for the period. There are two attributes for which a sample of lifted coupons may be tested: number of revenue passenger miles or number of revenue passengers. When the revenue-passenger-mile attribute is used, a sample of the dollar value of coupons is accumulated and divided by RPMs flown to produce an average yield per RPM. This average yield is then multiplied by the total number of revenue passenger miles flown by the carrier to determine earned revenue. The number-of-passengers attribute system develops an average fare per passen-

ger from the sample. Earned revenue is then determined by applying this average fare to the number of passengers transported for the period. The average yield per RPM is the most common attribute used for sampling systems.

Carriers use various methods to sample lifted coupons, such as testing all lifted coupons with a number ending in a selected digit. If statistical sampling methods are used by the airline, the independent auditor must be satisfied that the sampling plan has statistical validity, that it has been properly applied, and that the resulting precision and reliability, as defined statistically, are reasonable in the circumstances.

Under the sampling method, all off-line lifts are initially recorded in the air traffic liability account (in which on-line tickets were previously recorded). All lifts are processed for statistical data required by the CAB and for the required sampling data. Earned revenue is recognized on the basis of the sampling data of all lifts and is deducted from the total of coupons recorded in the air traffic liability account. Off-line coupons are recorded in the air traffic liability account to develop a total of all coupons sold, from which revenue of lifted coupons can then be recognized. Interline payable billings are deducted from the air traffic liability account when they are paid. Differences, such as those arising from clerical inaccuracies, between amounts originally recorded and amounts billed may be rejected and rebilled, or written off if the original recorded fare was incorrect.

Air Traffic Liability Verification

In order to validate the ATL account under the sampling method of revenue recognition, as well as to comply with CAB requirements, each air carrier annually performs a physical verification of its passenger revenue accounting practices. The purposes of this verification are to assess the degree of reliance that can be placed on the carrier's earned passenger revenue and, at the same time, to assess the balance in the ATL account.

When a sampling method is used, the airline frequently opens a new account for unearned revenue on the first day of the month in which the test begins. Only credit entries for coupons sold for the new period are recorded in this account. All lifts, refunds, exchanges, and liabilities for OAL coupons must be segregated between those sold in the prior period and those sold in the new period. The applicable amounts are charged to the appropriate period's unearned revenue account.

The carrier conducts a verification of the prior-period ending balance by analyzing lifted tickets, refunds, exchanges, and invoices for a period of time in the current period. The length of time of the analysis varies but rarely exceeds twelve months. All transactions with a validation date (sales date) prior to the first of the new period are accumulated in this analysis. When the flow of lifted coupons with a prior validation date becomes minimal, it can logically be concluded that virtually all such tickets have either been used or refunded.

The value of the prior-period coupons used in the verification may be derived from the priced fare of each prior-period coupon lifted, or it may be an amount determined by the sampling of such coupons.

When the sales/lift match method is used, aging of the inventory of passenger ticket sales provides the required verification.

Air Cargo

The administrative and accounting aspects of the air cargo operation involve the processing required to route and trace shipments and to perform the accounts receivable and accounts payable functions for the associated shipping charges. Shipments and charges for each shipment are based on airbill information. The shipper or, in the case of an infrequent shipper, the carrier prepares an airbill when an air shipment is to be originated.

The carrier whose airbill is used for initiating and routing the shipment becomes the *issuing airline*; later, when transferring the shipment to another carrier, it becomes the *transferring airline*. The carrier accepting this transferred shipment becomes the *receiving airline*, and the carrier that terminates the shipment by delivery to the consignee becomes the *delivering airline*.

Revenue accounting for air cargo concerns the determination of what charges should be paid by whom for the air freight services performed. The revenue recognition process is similar to that for passenger transportation: to record unearned revenue when an airbill is sold and to recognize revenue when a carrier provides the shipping service and thereby completes the earning process.

The basic air cargo revenue accounting functions consist of airbill pricing and airbill invoicing. Airbill pricing includes the establishment of rates according to published tariffs, rate extension, and revenue apportionment between carriers. Airbill invoicing includes direct customer billing and interline settlement.

This process is further complicated by rules regarding prepaid and collect shipments. On a prepaid shipment, the paid carrier is identified on the shipping instructions; therefore, all downline carriers can bill directly to the paid carrier. On a collect shipment, however, the identity of the collecting carrier frequently is not known to upline carriers because of shipment reroutings; therefore, carriers that participate in a collect shipment perform "snowball" billing. Each carrier bills the adjacent downline carrier in the route segment for all transportation services up to the point of transfer to that carrier, thus "snowballing" the bills to the collecting carrier.

The issuing airline is responsible for retaining an accounting copy of each airbill, supplying airbill copies to the freight revenue accounting audit sections of participating carriers, and accepting invoices from delivering airlines for shipments carried on prepaid airbills. The delivering airline must accept invoices for collect shipments from the immediately previous transferring airline and can invoice the issuing airline for actual transportation charges for prepaid shipments. Interline settlements are handled in the same manner as settlements of passenger ticket lifts.

Auditing Considerations

Since many of the sales billing and revenue applications of a carrier are computerized, the auditor should consider using computerized audit programs.

Station Sales. The auditor should consider the following procedures when testing station sales:

a. Tests of compliance with internal accounting controls. The following are some of the control procedures that an auditor would expect to find:
- Ticket sales credited to the ATL account are supported by ticket sales reports, which are balanced with auditors' coupons on a daily basis.
- The numerical sequence of tickets and all other accountable documents is accounted for via inventory reports on a daily basis.
- Ticket stock is maintained and disbursed by the carrier or an independent source, with ticket issues reported to the main office.

- Internal verification of cash and charge sales on the ticket sales report is performed.
- Segregation of duties exists between the sale of tickets and collection of cash, the recording of sales, the recording of accounts receivable, and the processing of lifted coupons.
- Deposits are made daily, and bank reconciliations are prepared by a person independent of the cash receipts function.
- Tickets are repriced on a test basis to the extent considered necessary and are appropriately recorded.

b. Review of the bank reconciliations of station accounts for propriety.

c. Test of the cutoff of station sales at the fiscal year-end.

d. Review of input to the air traffic liability account and the sales/lift match system, if applicable.

Travel Agency Sales. The auditor should consider the following procedures when testing travel agency sales:

a. Tests of compliance with internal accounting controls. The following are some of the control procedures that an auditor would expect to find:
- Tickets and reports are received from travel agencies or from appropriate area settlement banks on a scheduled basis.
- The entry to receivables and air traffic liability is supported by travel agency reports and auditors' coupons.
- Tickets may be priced individually and introduced into the sales system via a subsidiary sales file, which is balanced with travel agency reports.
- Differences between the airline and travel agencies are adjusted on a timely basis.
- Segregation of duties exists between the sale of tickets, the recording of ticket sales, and the recording of accounts receivable.
- The deposit of cash is performed by the settlement bank.
- The ATA periodically audits the agencies to ensure that ticket sales are properly reported to the banks.
- Provision has been made for review of the carrier's controls, and procedures exist for determining unreported agency sales. (A sales/lift match system or a variation thereof is the best control for unreported sales.)

b. Review of the area settlement bank statements and bank reconciliations for propriety.

c. Confirmation of receivable balances with the area settlement banks during the period under audit.

d. Test of the sales cutoff at the fiscal year-end.

e. Investigation of the differences arising from the carrier's audit of agency tickets and notation of the disposition of such differences.

f. Review of the input to the air traffic liability account and the sales/lift match system, if applicable.

g. Agreement of recorded commissions with the travel agency sales summary.

Interline Receivables. The auditor should consider the following procedures when testing interline receivables:

a. Tests of compliance with internal accounting controls. The following are some of the control procedures that an auditor would expect to find:
   - Receivables are supported by lifted tickets.
   - Internal verification of ticket pricing for billing purposes is performed.
   - Procedures require the billing and recording of sales on a current basis.
   - Segregation of duties exists for the recording of sales and accounts receivable and the reconciliation of clearinghouse bank statements.

b. Examination of subsequent receipts per the clearinghouse statements.

c. Confirmation of receivable balances with carriers or performance of alternative tests.

d. Review of documentation in support of tickets rejected and rebilled.

Interline Payables. The auditor should consider the following procedures when testing interline payables:

a. Tests of compliance with internal accounting controls. The following are some of the control procedures that an auditor would expect to find:
   - Internal verification of coupons included in the billing from other carriers is performed for pricing and accuracy.
   - If differences are discovered during the audit, the affected

items are rejected and rebilled to carriers on a timely basis.
- Individually priced ticket files are matched and deducted from the sales file.
- Segregation of duties exists between the payables input and payment processing.

b. Agreement of the payable amount during the period under audit.

c. Agreement of subsequent payments with clearinghouse statements.

d. Review of documentation in support of tickets rejected in the payable audit and assurance that such tickets are included in the receivable file.

Revenue Recognition. The auditing considerations are different for the two types of revenue recognition methods.

1. *Sales/lift match method*
   a. Tests of compliance with the following control procedures over additions of coupons to the unearned revenue file:
      - Station sales are supported by ticket sales reports, which are balanced with auditors' coupons on a daily basis.
      - Internal verification of cash and charge station sales on the ticket sales report is performed.
      - Tickets are repriced to the extent considered necessary before they are recorded in the sales file.
      - The entry to receivables and air traffic liability is compared with travel agency reports and auditors' coupons.
      - The subsidiary sales file of tickets is balanced with travel agency reports.
      - A cutoff of station and travel agency sales is performed.

   b. Tests of compliance with the following control procedures over deductions of coupons from the unearned revenue file:
      - The flight movement report (FMR) is used as a control for lifted tickets received from stations.
      - On-line tickets are matched and deducted from the sales file.
      - Interline payable billings from other carriers are internally verified and repriced before being deducted from the sales file.

   c. Tests of specific additions and deductions from this file for the period under audit.

d. Tests of selected coupons in the unearned file at one point in time for propriety and cutoff.

e. Review of the aging of this unearned file for unusual items.

f. Test of the cutoffs of the file via a review of lifts prior and subsequent to the period under audit for proper deletion from and inclusion in the file.

g. An analytical review of balances, key passenger statistics, and activity in the revenue and air traffic liability accounts for reasonableness.

h. Tests of aging and controls of on-line tickets lifted for which no sale has been recorded.

2. *Sampling method*

a. Review of the sampling method and tests of the carrier's method for generating the statistical sample and calculating yield entries for the period under audit.

b. Tests of compliance with the following control procedures over additions of coupons to the unearned revenue file:

- Station sales are supported by ticket sales reports, which are balanced with auditors' coupons on a daily basis.
- Internal verification of cash and charge station sales on the ticket sales report is performed.
- Tickets are repriced to the extent considered necessary before they are recorded in the sales file.
- The entry to receivables and air traffic liability is compared with travel agency reports and auditors' coupons.
- The subsidiary sales file of tickets is balanced with travel agency reports.
- A cutoff of station and travel agency sales is performed.

c. Tests of compliance with the following control procedures over deductions of coupons from the unearned revenue file:

- The flight movement report is used as a control for lifted tickets received from stations.
- Interline payable billings from other carriers are internally verified and repriced before being deducted from the sales file.

d. Review of the balance in the air traffic liability at the audit date and of the earned revenue accounts for the period under audit by testing the verification procedure performed by the carrier via pricing of lifts, refunds, and interline receivables and payables subsequent to the audit date.

e. An analytical review of balances, key passenger and revenue statistics, and activity in the revenue and air traffic liability accounts for reasonableness.

f. Tests of aging and controls of on-line tickets lifted for which no sale has been recorded.

Airframe and Engine Overhaul Expense

The Federal Aviation Administration has established overhaul cycles for each airframe and engine component in an effort to prevent potential hazards and to ensure transportation safety.

For accounting purposes, airframe and aircraft engine overhauls encompass all inspections or replacements of major components, which the civil air regulations require at specific maximum periodic intervals to recertify that the frame or engine is completely airworthy. An overhaul does not include, however, the cost of routine replacement of minor parts and servicing or inspection of airframes and aircraft engines. Also excluded from overhauls are costs accounted for as restoration of assets, such as extraordinary costs associated with the renewal of major structural parts beyond the scope of normal periodic overhauls, and other costs with a life span similar to the depreciable service life of the related airframe or aircraft engine.

Overhauls may be performed on a continuous basis or in one operation (*block* or *one-shot* basis). In recent years technological advances in the maintenance of airframes and aircraft engines have resulted in the wider use of continuous overhaul programs. However, entrants to the airline industry may not be suited to the continuous overhaul program. In addition, the aircraft fleets and inventories of aircraft engines operated by most air carriers have grown to the point at which actual overhaul costs have become fairly stable from year to year. As a result of these technological advances and the growth in aircraft fleets, many air carriers now recognize all of their overhaul and maintenance costs as expenses as they are incurred.

Leased Aircraft

Lease agreements often contain provisions that require the aircraft to be returned to the lessor with a minimum number of hours remaining to the next overhaul. Cash payments to the lessor may be required if the aircraft is returned with fewer hours remaining than the minimum required by the lease agreement.

This factor should be considered in the carrier's policy of accounting for overhauls. The impact will vary according to the overhaul accounting method used and the terms of the individual lease agreements. The objective is to avoid having either unamortized overhaul costs or an unneeded accrual on the books when the aircraft is returned. Also, if it appears that a cash payment will be required, the objective is to recognize the expense as the related aircraft hours accumulate. The specific methods used to achieve these objectives depend on the circumstances. The selection of an accounting method may be influenced by these factors.

Used Aircraft

Used aircraft are acquired in various conditions and at various times between overhauls. The existing stage of overhaul may need to be considered in determining the amount and timing of overhaul expense. For example, the built-in overhaul accounting method requires the buyer to allocate the total purchase price between the cost of the aircraft and the overhaul component. The aircraft's stage of overhaul when purchased would have an impact on the amount of the overhaul component, as well as the initial overhaul amortization period. Similar considerations may be required when other overhaul accounting methods are used in order to avoid distorting overhaul expense, particularly in the period between the purchase date and the first overhaul performed (see "Accounting Methods").

Accounting Methods

Air carriers should adopt an accounting method that recognizes overhaul expenses in the appropriate period. This may result in different methods for different aircraft, as well as different methods for airframe overhauls and engine overhauls. The method chosen should recognize, among other things, the carrier's operating practices with respect to airframe and engine overhauls. The following accounting methods are most often employed:

- Direct expensing method
- Built-in overhaul method
- Deferral method
- Accrual method

Direct Expensing Method. All trunk carriers and some others recognize the cost of overhauls as expenses as they are incurred

because, in the case of carriers with large fleets, such costs are relatively constant from period to period.

Built-in Overhaul Method. The built-in overhaul method is based on segregation of the aircraft costs into those that should be depreciated over the useful life of the aircraft and those that require overhaul at periodic intervals. Thus, the estimated cost of the overhaul component included in the purchase price is set up separately from the cost of the airframe and engines and is amortized to the date of the initial overhaul. The cost of the initial overhaul is then capitalized and amortized to the next overhaul, at which time the process is repeated.

Deferral Method. Under the deferral method, the actual cost of each overhaul is capitalized and amortized to the next overhaul.

Accrual Method. The accrual method provides for estimating the cost of the initial overhaul and accruing the cost, based on an hourly rate, to the overhaul.[2] At that time, the actual cost of overhaul is charged to the accrual, with any deficiency or excess charged or credited to expense. The cost of the next overhaul is then estimated, based on the new rate, and accrued to that overhaul, at which time the process is repeated.

Auditing Considerations

In the case of the built-in overhaul and accrual methods, the estimated cost of initial overhauls should be tested by reference to manufacturers' specifications, historical experience, and the like. Actual capitalized costs of succeeding overhauls should be examined for propriety. Time between overhauls (TBO) should be tested by reference to FAA overhaul requirements, manufacturers' specifications, or the carrier's experience. Resulting rates and their application should be tested for reasonableness.

In the case of the deferral method, the appropriateness of the capitalized cost should be tested. In addition, the amortization period should be tested by reference to FAA overhaul requirements, manufacturers' specifications, or the carrier's experience.

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2. For CAB reporting purposes, the accrual method is not permitted for new types of aircraft acquired after January 1, 1976. For consistency the CAB allows the accrual method for aircraft acquired after January 1, 1976, only if the accrual method was previously used for that aircraft type.

Insurance

Insurance programs for airlines normally include passenger liability, hull, contents, and group and workmen's compensation insurance. Contents and group and workmen's compensation insurance are comparable to the insurance practices of other industries.

Passenger liability insurance relates to the insurance of risks associated with providing air transportation services to passengers. Premiums are normally determined on the basis of a rate for passenger miles flown. The rate is normally fixed; passenger miles flown is a variable.

Hull insurance relates to flight equipment, and rates are normally based on dollar value of insured equipment. The insured value of equipment may be determined in several ways (net book value, replacement cost, or estimated fair value). The rate applicable to insured value of equipment is normally fixed.

The recognition of insurance expense is based on the policies and rates in effect for the period. For example, insurance expense for passenger liability and hull insurance can be based on actual data for the period; that is, the expense recognized with regard to passenger liability insurance is based on a policy rate times the number of passenger miles flown.

Auditing Considerations

The auditor's objective relative to an airline's insurance program is to satisfy himself that the costs of obtaining insurance have been recognized in the appropriate period.

The auditor should review the insurance policies in force to determine that the costs of coverage have been accounted for properly. The auditor should obtain an analysis of prepaid insurance, accrued premiums payable, and insurance expense and compare it with the financial records. He should consider testing the amounts recorded on the policies in force and related actual data for policies with variable items, such as the number of revenue passengers and the dollar value of insured equipment.

Payroll (Flight Personnel)

Payroll expenses represent a substantial amount of an airline's operating expenses, with a significant portion of that expense for payment of flight personnel. The pay of flight personnel is usually determined by applying the rates specified in the contractual

provisions between the airline and the respective employee bargaining group to the following items: number of hours flown, the type of equipmet flown, whether the hours flown were day or night hours, seniority, and flying status (pilot, copilot, flight engineer, flight attendant). Crew members are also reimbursed at a specified rate for the number of hours spent away from their assigned home base.

After a flight has been completed, the senior officer on the flight prepares a report (time sheet) detailing the other crew members working the flight, actual travel time on all segments of the flight, the flight number, and equipment type. The time sheet is then submitted to either the payroll department or the crew members' base station, where the data is posted to a monthly summary schedule maintained for each individual.

The airline calculates the employees' pay by applying the rates specified in the union contract to the time flown. The payroll check representing monthly salary, less any advance, is forwarded to the crew member along with a copy of the monthly flight summary and the calculation that was used to arrive at the pay. An example of the calculation of an individual's pay for a single flight is shown in exhibit 3. Alternatively, under some labor agreements, flight crews may be paid a monthly guaranteed salary, based on a certain level of flight time credit. If the individual has worked less than the base flight time credit, he will receive the guaranteed salary. If the individual works more than the base flight time credit, then he will receive added compensation for his overtime. Under this approach, the complex data gathering and price-out are not performed to calculate an individual's pay but rather to allocate his base guarantee and overtime to various flights.

In addition to the normal month-end salary accrual, other accruals frequently are associated with the payroll costs of flight personnel:

- *Flight time over the maximum.* Most union contracts specify a maximum number of hours that a crew member can fly during a month. Frequently, flight personnel exceed that maximum because of scheduling problems or other reasons. Certain airlines establish a credit plan account, required by union contract, which is used to accumulate hours flown in excess of the maximum. The crew member can use that time at his discretion in future periods in lieu of working the required hours. At any point in time, the accumulated credit plan account hours valued

EXHIBIT 3

Sample Wage Calculation for One Flight for a Crew Member

Equipment		707	
Actual departure time		1724	
Ramp minutes[1]		97	
Scheduled minutes		99	
	Day		*Night*
Pay minutes[2]	36		63
Rate ($)[3]	.8600		.8800
Total pay ($)	30.96		55.44
Total flight pay ($)		86.40	

1. This is the flight time reported by the pilot on his time sheet.
2. The union contract stipulates that the crew member will be paid the greater of ramp time or scheduled time. Also, any flight time between 18:00 and 6:00 (24 hour clock) is considered to be night flight time.
3. The rate is determined by type of equipment flown, crew member seniority, and flying status as specified in the union contract.

at the current pay rate represent a liability to the airline and are accrued. Airlines that do not have such a plan pay crew members on a current basis for all hours flown.

- *Vacation accrual.* Vacation time earned during one fiscal year must be taken during the next fiscal year. Accordingly, for each accounting period, the airline accrues the liability for earned vacation time for estimated probable future payments attributable to employees' service during that period.
- *Retroactive pay accrual.* When employees continue to work after the expiration date of their contract, the airline generally accrues an amount representing the anticipated increase in wage rates and certain fringe benefits because such increases are generally retroactive to the expiration date of the prior contract. Consideration should be given to the provisions of SFAS No. 5, *Accounting for Contingencies.* Determinations should be made of the probability that the increase will be retroactive and of whether the amount is reasonably estimable at the examination date.

Auditing Considerations

Controls over payroll in the airline industry are similar to those in effect in other industries. When the auditor tests compliance with controls in the payroll area, the objectives include assurance of the following:

- Employees shown on the payroll records were authorized and hired by the appropriate persons.
- Payrolls were accurately calculated, using the proper measures of service time and the authorized rates for reimbursement.
- Payroll deductions were determined in accordance with legal requirements or employee authorizations and were paid to the government, unions, and other parties.
- Payroll transactions were properly recorded at the dates that wages were earned or paid, whichever was appropriate.
- Payroll expenses were charged against operations in the proper accounting period.

In addition to the procedures normally applied in testing payroll transactions, such as system review and the application of analytical procedures to test the overall reasonableness of the various categories of payroll expense, the following procedures should be considered when testing the payroll of flight personnel:

- Documentation and testing of the internal controls in effect for the transmittal of flight times to the payroll department.
- Verification of crew members' seniority by examination of their personnel records.
- Testing of scheduled minutes for reasonableness by comparison with the airline's timetable of arrivals and departures.
- Testing of ramp hours by agreeing arrival and departure times with the flight logs.
- Tests of the split between day and night hours, as well as the calculation of hours to be paid (ramp hours or scheduled hours).
- Tests of the type of equipment flown by reference to the flight logs.
- Verification of pay rates applied to hours to be paid by agreement with the union contract.
- Tests of the accumulated vacation time and credit plan account hours.

- Discussion of the status of union contract negotiations with company officials.

Fixed Assets and Depreciation Policies

An air carrier's fixed assets generally consist of flight equipment, ground property and equipment, and capital leases. Rotable parts and assemblies and work-in-progress accounts used to accumulate costs to be capitalized are also classified as fixed assets. Some air carriers include progress payments on flight equipment purchase contracts made to aircraft manufacturers as fixed assets; however, some carriers include these under other noncurrent asset captions.

Flight equipment consists of airframes, engines, and improvements to owned or leased aircraft. Flight equipment is classified as operating or nonoperating in accordance with CAB regulations. Operating property and equipment include all items in use in air transportation services or in services related to air transportation. In addition, property and equipment undergoing overhaul, modification, or repair and property and equipment held for standby use (ready for immediate use as backup) remain in the operating accounts.

Ground property and equipment consist of land, buildings, leasehold improvements (such as those made in passenger and cargo terminals), and equipment (including that used to service aircraft and traffic loads on airport ramps and in terminals, to prepare and service food, to maintain flight and ground properties, and to conduct sales, training, and other office functions).

Capital leases recorded by an air carrier include leases that meet the requirements for capitalization of Statement of Financial Accounting Standards No. 13, *Accounting for Leases*, as amended, and related interpretations. Both flight equipment and ground property and equipment may be acquired through capital leases.

The auditor should adopt procedures to determine that the aircraft exist and are owned by the carrier. This is in addition to the usual audit procedures performed on fixed assets, other than rotable parts. Such steps may include:

- Physical inspection of aircraft.
- Review of flight logs.
- Confirmation with the FAA that the carrier owns the aircraft.

Elements of Asset Valuation

The total cost recorded by the air carrier for property and equipment includes all expenditures applicable to its acquisition. These include the manufacturer's sales price, sales tax, freight costs, and costs of any additions, improvements, and modifications. In addition, interest related to funds for major project expenditures (such as progress payments on aircraft purchase contracts and many construction projects) generally are capitalized as part of the cost of the asset and disclosed in accordance with SFAS No. 34.

Purchase Incentives

Airlines frequently negotiate purchase incentives with aircraft manufacturers whereby, as an inducement to purchase a particular manufacturer's aircraft, the manufacturer will issue credits, which can be used for the purchase of spare parts but may not be applied as part of the purchase price of aircraft. Examples of other incentives are guaranteed trade-in values and purchase credits for flight crew training equipment (flight simulators). For accounting purposes, though, the credit can be applied as a reduction of the purchase price of the aircraft or amortized over the life of the related aircraft.

Depreciation

The function of depreciation is to allocate, over the expected period of use, the cost of the asset and any capitalized improvements, less estimated residual value. This is accomplished through the use of any acceptable depreciation method. The straight-line method is the prevalent one in the industry.

A depreciation method may be applied to a single asset (unit depreciation) or to a group or pool of assets that are similar in nature (group depreciation). Under the unit method, the airline depreciates the cost of the individual items of property and equipment. Under the group method, the airline depreciates the aggregate cost of a group of equipment that is fairly homogeneous, despite differences in the service lives of individual items.

An air carrier can use unit or group depreciation methods on different groups of assets. Group depreciation usually is applied to groups of assets that are significant in number but have relatively small unit values, such as rotable parts and assemblies. In these cases, the ease of application is the basis of selection between the two methods. Unit depreciation is generally used for other fixed

assets, such as aircraft and engines, that have large unit costs and are comparatively few in number.

The period over which an asset is depreciated (its expected useful life) and its estimated residual value are determined on the basis of many factors. Aircraft are maintained in relatively the same condition throughout their service lives; therefore, property and equipment are replaced primarily because of market growth, technological developments, operating cost efficiency, and revenue-generating capability. Because such factors may affect each carrier in a different way, various air carriers often have different estimated useful lives for the same type of equipment. Residual values for the same type of equipment also vary among air carriers for the same reason. The determination of aircraft lives and residual values also varies according to each company's projections of when aircraft will be replaced, its ability to finance replacements, length of flights, number of takeoffs and landings, and similar factors affecting the cost of maintaining aircraft in flying condition.

Once depreciation of an aircraft begins, it continues until the aircraft is permanently removed from service and is being held for sale or other disposal. Accordingly, depreciation continues even if the aircraft is temporarily out of service, for example, because of strikes, lack of traffic, or other grounding reasons.

Leased Property and Equipment

All leases should be classified as either capital or operating in accordance with FASB Statement No. 13, *Accounting for Leases.* That statement contains a number of definitions, and a carrier should review it and all its amendments and interpretations carefully before determining whether a lease is capital or operating. (Subleases of equipment should be reviewed for classification in the same manner as all other leases.)

Although the practice is uncommon, some air carriers lease fixed assets to other carriers. The carrier should review such leases to determine that they are classified and accounted for in accordance with the provisions of FASB Statement No. 13 and all its interpretations and amendments.

Specific criteria apply to leases involving government-owned property (for example, municipally operated airports). FASB Interpretation No. 23, issued in August 1978, states that, if certain conditions are met, such leases should be classified as operating. (If

the conditions are not met, the lease is subject to FASB Statement No. 13 criteria for classifying leases not involving government-owned property.) The most significant condition listed in FASB Interpretation No. 23 is the following:

> The lessor, or in some cases a higher governmental authority, has the explicit right under the lease agreement or existing statutes or regulations applicable to the leased property to terminate the lease at any time during the lease term, such as by closing the facility containing the leased property or by taking possession of the facility.

Disposals of Property and Equipment

An airline can dispose of property and equipment either by sale or by involuntary conversion. For such property the difference between the proceeds realized on a sale or involuntary conversion and the cost of the property less accumulated depreciation is recorded as a nonoperating gain or loss.

Aircraft held for sale are not carried at amounts in excess of net realizable value. If aircraft remain unsold for a period of time, it may indicate that the carrying value is too high. Where applicable, the auditor should review the sales prices of similar aircraft and, perhaps, the book value that other carriers assign to similar aircraft. This information is filed with the CAB under part 241 of its economic regulations and is available upon request. The information may provide a basis for evaluating net realizable value of unsold aircraft.

Occasionally, a carrier retires a major portion of its fleet. At such a time, in addition to determining that the value of the aircraft is not in excess of net realizable value, the auditor should focus attention on the carrying value of the related rotable and expendable parts. Those parts that can be used only on the retired aircraft and those whose carrying value exceeds net realizable value are written down.

Developmental and Preoperating Costs

Developmental and preoperating costs, as the terms are used in this guide, are not considered research and development costs within the meaning of FASB Statement No. 2. These costs are deferred within the guidelines of APB Opinion No. 17, *Intangible Assets.*

Nature of the Costs

The cost of inaugurating service over major new routes and the cost of integrating new types of aircraft or services that meet either of the following criteria generally are deferred and amortized over the expected period of benefit, usually from two to five years.

a. The costs are directly related to a specific development or preoperating project and would not otherwise have been incurred in normal air transport operations.

b. The costs are incurred in connection with the commencement of revenue operations over new or extended routes or the introduction of new types of aircraft or services.

Deferred Costs

Developmental costs include those types of costs directly related to the development of new routes (or extension of existing routes), such as advertising and promotion expenses, legal expenses, related travel and incidental expenses, and expenses of regulatory proceedings. An air carrier does not defer developmental costs that otherwise would be incurred in the carrier's normal air transport operations. For example, advertising expenses that are necessary for normal carrier operations are not deferred. However, advertising expenses are sometimes deferred if the applicable advertising program relates exclusively to the promotion of a major new route.

Preoperating costs include flight crew training, maintenance training, prerevenue flight expenses, insurance, and depreciation. Like developmental costs, preoperating costs relate directly to specific preoperating projects, such as preparation for operation of new routes subsequent to certification by the CAB or integration of new types of aircraft or services. For example, an air carrier normally defers the training costs necessary to upgrade existing flight crews to operate a new aircraft type.

Criteria for Deferral

The following criteria should be considered in determining the appropriateness of the deferral of developmental and preoperating costs:

- Estimated benefit to future periods.
- Recoverability through future operations.
- The ratio of incremental to normal operating costs.

- Systematic accumulation and segregation of specific project costs.

Since the enactment of the Airline Deregulation Act of 1978, new domestic routes can be obtained more readily than in the past and with reduced regulatory delay. An air carrier's ability to alter its route structure has to be considered in assessing the estimated benefit to future periods and the recoverability through future operations of deferred route development costs.

Auditing Considerations

Audit procedures for developmental and preoperating costs should be comparable to those in the audit of deferred charges for other commercial and industrial enterprises. Such procedures should include a review and analysis of the data to determine that any deferral of charges to future periods is appropriate. Additionally, the reasonableness of the deferral period should be determined, and the amortization should be tested for propriety.

Rotable and Expendable Parts

Rotable parts and assemblies of significant value are classified along with flight equipment as fixed assets, and expendable parts are classified as current assets.

Both rotable and expendable parts relate to flight equipment. Their classification ordinarily depends on the carrier's maintenance program.

Some carriers base the distinction between rotable and expendable parts on manufacturer or engineering studies, while other carriers have a unit value limitation below which a rotable part becomes an expendable part.

Because they are fixed assets, the asset valuation of rotable parts and assemblies is similar to that of all other property and equipment. Rotable parts and assemblies are normally depreciated over their useful lives or service lives according to a group method of depreciation. Generally, the cost of repairing rotables is charged to expense as it is incurred.

Expendable parts are recorded at cost in a current asset account for spare parts and supplies, which is similar in nature to a prepaid expense, and are charged to expense as they are used. Materials and supplies held in small quantities and purchased as needed are charged to expense when they are purchased.

Reusable spare parts and supplies recovered in connection with construction, maintenance, or retirement of property and equipment are included with expendable parts at the average cost of comparable items. This valuation is typically based on the condition of the part or group of parts and their continuing utility.

An airline generally establishes an allowance for obsolescence to distribute the cost of the base support stock of expendable parts over the service lives of the related equipment. In making this calculation, the carrier can classify parts by type of aircraft. The carrier also takes into account the estimated useful life of each aircraft fleet, the estimated cost of expendable parts expected to be on hand at the end of the useful life, and the estimated salvage value of the parts.

Typically, the provision is made by dividing the net book value of the spare parts (cost or average cost of the parts less accumulated allowances for obsolescence) by the remaining useful or service life of the aircraft to which they relate. A good management practice would be to review the allowance accounts periodically for reasonableness in relation to changes in technology and changes in the estimated useful or service lives of the aircraft.

Auditing Considerations

The auditor can test the internal accounting controls over expendable and rotable parts, looking for controls over such functions as receiving and shipping (to line stations or maintenance shops), parts requisitioning, surplus and obsolescence parts declaration, scrap sales, and physical inventory verification. The auditor may observe the physical counting of the expendable and rotable parts or perform other procedures to determine the reasonableness of the inventory quantities of these items, such as test counts on a cycle count basis, confirmation of line stores and inventory quantities with the station personnel, and cutoff work on receiving and shipping. In addition, customary inventory procedures to discover surplus and obsolete parts and to determine the realizability of the related costs should also be performed. Furthermore, the auditor should test the assumptions employed in determining the provision for obsolescence and fleet phase-out by referring to engineering or management studies of market and salvage values and useful or service lives.

Chapter 4

Regulatory Matters

Subsidy (Public Service Revenue)

The Civil Aeronautics Board may compensate airlines for providing services to eligible communities. The compensation is paid under either Section 406 or Section 419 of the Federal Aviation Act. The objectives of the subsidy programs are to further the commerce and postal service of the United States by providing air service to communities that would otherwise be without such service.

Section 406 Subsidy

Section 406 subsidy has been in effect for many years. It was initially designed to compensate carriers for providing mail service to communities where such service would otherwise be unprofitable for the carriers. Since the implementation of this subsidy program, passenger air service has grown significantly. Thus, the Section 406 subsidy currently compensates carriers for air transportation service generally, including both mail and passenger service.

The CAB determines the need for, and amount of, subsidy payments required by an individual carrier or a class of carriers on a case-by-case basis. The intent is to allow the carrier to meet operating expenses and to earn a reasonable return on investment on its subsidy-eligible routes. The CAB's determination is based, at least in part, on information concerning passenger and revenue data, operating expenses, and other information furnished by the carriers.

The CAB can set prospective rates, which are final and not subject to adjustment. The CAB also has the authority to issue temporary subsidy rates, which can be increased or decreased retroactively. Since adjustments to temporary rates are deter-

mined by the CAB, carriers generally cannot reasonably estimate the amount of any adjustment. Therefore, it is usually reflected in operations when the amount becomes known.

Carriers generally record subsidy revenues on the basis of monthly billing forms submitted to the CAB. These forms reflect the amount of subsidy to be received by the carrier for the month, based on the formula and rate then in effect.

While carriers may select any reasonable depreciation methods, service life, and residual value of flight equipment for book purposes, the CAB requires carriers receiving subsidy under Section 406 of the Federal Aviation Act to depreciate flight equipment on the straight-line method, employing the service lives and residual values set forth in Section 399.42 of the board's policy statements. Carriers receiving Section 406 subsidy are required to file on a quarterly basis CAB Form 41, Schedule P-5(a), "Components of Flight Equipment Depreciation."

Audit considerations include testing of revenue by reference to monthly billings and payments received and inquiry relative to potential rate adjustments. The carrier may have a contingent asset or contingent liability for any period for which a final subsidy rate has not been determined. Disclosure in the financial statements may be appropriate if final settlements have occurred for subsidy rates applicable to prior periods.

The Airline Deregulation Act of 1978 requires the Section 406 subsidy program to be phased out by January 1, 1986.

Section 419 Subsidy

The Section 419 subsidy program was added by the Airline Deregulation Act of 1978 to guarantee essential air service to small communities. The CAB determines the level of essential air service for eligible cities (including minimum number of available seats and reasonable scheduling). The CAB also selects a carrier to furnish the air services and determines the amount of subsidy to be paid the carrier. Through 1988 the Section 419 subsidy program also empowers the CAB to require an incumbent carrier to continue air service to eligible cities after the carrier has filed notice of its intent to suspend, terminate, or reduce service to that city. The CAB can require the carrier to continue to provide service for thirty-day periods until a replacement carrier is found.

A carrier is entitled to be compensated for losses it incurs in providing forced services. If the carrier has been receiving subsidy

payments under the Section 406 or Section 419 program, those subsidy rates continue throughout the forced-service period. If the carrier has not been receiving Section 406 or Section 419 subsidies, the amounts of compensation for the forced-service period are determined by the CAB.[1]

1. At the time this guide is being issued, the Section 419 program is relatively new. Final rules concerning the calculation of the subsidy have not been adopted. The reader should be aware of the regulation in effect for current policy.

Chapter 5

Illustrative Financial Statements

The following sample financial statements of an airline are included for illustrative purposes only and are not intended to establish reporting requirements. Furthermore, the dollar amounts shown are illustrative only and are not intended to indicate any customary relationship among accounts. The sample financial statements do not include all of the accounts and transactions that might be found in practice. The notes indicate the subject matter generally required to be disclosed, but they should be expanded, reduced, or modified to suit individual circumstances or materiality considerations. In addition to the illustrative notes that are presented, some of which are more or less peculiar to airlines, the notes to an airline's financial statements should include any other appropriate disclosures, such as information concerning related-party transactions and subsequent events.

Example Air Lines, Inc.
Balance Sheets
December 31, 19X9 and 19X8
(in thousands)

Assets	*19X9*	*19X8*
Current assets		
Cash	$ 16,673	$ 36,745
Short-term investments, at cost, which approximates market	10,053	—
Receivables, principally traffic, less allowance for doubtful receivables ($1,045 in 19X9 and $2,428 in 19X8)	77,924	53,168
Expendable parts, less allowance for obsolescence ($2,989 in 19X9 and $2,390 in 19X8)	18,382	16,983
Prepaid expenses	3,433	4,186
Total current assets	126,465	111,082

Liabilities and Stockholders' Equity	*19X9*	*19X8*
Current liabilities		
Current installments of long-term debt (note 3)	$ 45,859	$ 38,153
Current portion of capital leases (note 2)	5,755	5,237
Accounts payable	47,161	39,450
Air traffic liability	56,174	42,621
Accrued expenses	20,906	21,913
Total current liabilities	175,855	147,374
Long-term obligations		
Debt (note 3)	174,545	229,291
Capital leases (note 2)	93,250	98,532
	267,795	327,823

Property and equipment, at cost (notes 2 and 3)		
Flight equipment	639,691	632,361
Other property and equipment	156,792	143,977
	796,483	776,338
Less accumulated depreciation and amortization	271,932	227,243
	524,551	549,095
Advance payments on equipment purchase contracts	2,665	3,124
Net property and equipment	527,216	552,219
Developmental and preoperating costs and other assets	16,735	15,308
	$670,416	$678,609

Deferred credits		
Deferred income taxes (note 4)	43,505	43,302
Other	4,547	3,461
	48,052	46,763
Commitments and contingent liabilities (notes 2 and 5)		
Stockholders' equity		
Common stock of $1 par value. Authorized 20,000,000 shares; issued 7,153,000 shares	7,153	7,153
Additional paid-in capital	72,926	72,926
Retained earnings	98,635	76,570
Total stockholders' equity	178,714	156,649
	$670,416	$678,609

See accompanying notes to financial statements.

Example Air Lines, Inc.
Statements of Earnings and Retained Earnings
Years Ended December 31, 19X9 and 19X8
(in thousands)

	19X9	*19X8*
Operating revenues		
Passenger	$559,715	$463,271
Cargo	63,366	48,854
Mail	10,867	10,562
Public service revenues (note 6)	10,472	13,671
Other	12,646	15,106
Total operating revenues	657,066	551,464
Operating expenses		
Flying operations	200,468	156,839
Maintenance	115,013	106,537
Passenger service	56,213	46,218
Aircraft and traffic servicing	79,787	53,782
Promotion and sales	76,411	63,186
General and administrative	31,687	33,769
Depreciation and amortization	49,547	49,235
Total operating expenses	609,126	509,566
Operating income	47,940	41,898
Nonoperating expense and (income)		
Interest expense	27,803	32,779
Interest capitalized	(2,127)	(3,078)
Gain on disposition of property and equipment	(3,644)	(1,786)
Other, net	(690)	4,204
Total nonoperating expense, net	21,342	32,119
Earnings before income taxes	26,598	9,779
Income taxes (note 4)	956	570
Net earnings	25,642	9,209
Retained earnings at beginning of year	76,570	67,361
Less cash dividends ($.50 per share)	(3,577)	—
Retained earnings at end of year	$ 98,635	$ 76,570
Net earnings per common share	$ 3.58	$ 1.29

See accompanying notes to financial statements.

Example Air Lines, Inc.
Statements of Changes in Financial Position
Years Ended December 31, 19X9 and 19X8

(in thousands)

	19X9	*19X8*
Working capital provided		
Net earnings	$ 25,642	$ 9,209
Items that do not use (provide) working capital		
Depreciation and amortization	49,547	49,235
Deferred income taxes	203	—
Gain on disposition of property and equipment	(3,644)	(1,786)
Other	461	5,446
Working capital provided from operations	72,209	62,104
Proceeds from new borrowings	2,107	3,327
Proceeds from disposition of property and equipment	4,434	6,052
Total working capital provided	78,750	71,483
Working capital used		
Additions to property and equipment, net of advance payments	25,834	16,786
Advance payments on equipment purchase contracts	2,665	2,914
Current installments and repayments of long-term debt	59,772	69,312
Cash dividends	3,577	—
Total working capital used	91,848	89,012
Total decrease	$(13,098)	$(17,529)
Changes in components of working capital		
Increase (decrease) in current assets		
Cash	$(20,072)	$ 7,908
Short-term investments	10,053	(10,042)
Receivables, net	24,756	(14,135)
Expendable parts, net	1,399	340
Prepaid expenses	(753)	223
(Increase) decrease in current liabilities		
Current installments of long-term obligations	(8,224)	(6,515)
Accounts payable	(7,711)	2,263
Air traffic liability	(13,553)	390
Accrued expenses	1,007	2,039
Total decrease	$(13,098)	$(17,529)

See accompanying notes to financial statements.

Example Air Lines, Inc.
Notes to Financial Statements
Years Ended December 31, 19X9 and 19X8

1. Summary of Significant Accounting Policies

The following is a summary of significant accounting policies of the company that are not disclosed elsewhere in the accompanying financial statements or related notes.

Expendable parts. Flight equipment expendable parts are priced at average cost. An allowance for obsolescence is provided for flight equipment expendable parts to allocate the costs of these assets, less estimated residual value, over the useful lives of the related aircraft and engines.

Preoperating costs. Significant costs, such as those for traffic promotion and personnel training, related to the inauguration of service over major new routes and to the introduction of new types of aircraft are deferred and amortized over a period of two to five years.

Property and equipment. Flight equipment and other property are carried at cost. Major additions, betterments, and renewals are capitalized. Maintenance and repairs, including major overhauls, are charged to operating expenses as they are incurred. Depreciation and amortization to estimated residual values are computed on the straight-line basis over the estimated useful lives of the related assets, which are fourteen years for new aircraft, to a common retirement date of 19X6 for used aircraft and all related flight equipment, and two to ten years for other property and equipment.

At the time assets are retired or otherwise disposed of, the cost and accumulated depreciation and amortization are removed from the related accounts, and the difference, net of proceeds, is recorded as a gain or loss.

Interest related to deposits on aircraft purchase contracts is capitalized and amortized over the useful lives of the aircraft.

Leases primarily for flight equipment are classified and accounted for as capital leases under SFAS no. 13.

Passenger and cargo revenues. Passenger and cargo sales are recognized as earned revenue when the transportation is provided.

Investment tax credits. Investment tax credits generated by the acquisition of assets are recognized by use of the flow-through method to the extent that the benefit would have been realized had taxes payable been based on pretax accounting income, adjusted

for permanent differences. In addition, remaining unused investment tax credits, subject to certain limitations, are offset against existing net deferred tax credits to the extent that those net deferred tax credits would reverse during the carryforward period.

Earnings per share. Earnings per common share are based on the weighted average number of common shares outstanding during the year.

Segment information. The company operates within one industry (air transportation), and, accordingly, no segment information is provided.

2. Flight Equipment

The company was committed at December 31, 19X9, to acquire aircraft at a total cost of $25,100,000, of which $2,665,000 has been paid in advance.

The company leases, or has constructed as leasehold improvements on leased real property, its principal facilities, including airport and terminal facilities, sales offices, overhaul and maintenance bases, training center, and general offices. The leases are generally on a long-term net rent basis whereby the company pays taxes, maintenance, insurance, and certain other operating expenses applicable to the leased premises. Management expects that, in the normal course of business, leases that expire will be renewed or replaced by other leases.

The assets and related obligations for capital leases were initially recorded at amounts equal to the present value of future minimum lease payments using incremental borrowing rates at the inception of the leases. The assets are amortized over the life of the lease by the straight-line method. Interest expense is accrued on the basis of the outstanding obligations under capital leases. Leased equipment under capital leases is included in the balance sheets at December 31, 19X9 and 19X8, as follows.

	19X9	*19X8*
	(in thousands)	
Flight equipment	$105,350	$105,350
Other property and equipment	6,765	5,250
	112,115	110,600
Less accumulated amortization	33,635	26,544
	$ 78,480	$ 84,056

At December 31, 19X9, minimum lease payments under leases expiring after December 31, 19X0, were as follows.

	Capital leases	*Operating leases*
	(in thousands)	
19X0	$ 11,218	$ 7,213
19X1	9,911	6,789
19X2	9,595	6,506
19X3	9,595	6,318
19X4	9,595	6,108
Thereafter	114,933	84,663
Total minimum lease payments	164,847	$117,597
Less amount representing interest*	65,842	
Present value of obligations—capital leases	99,005	
Less current portion of capital leases	5,755	
Long-term obligations—capital leases	$ 93,250	

*Amount necessary to reduce minimum lease payments to present value calculated at the company's incremental borrowing rates at the inceptions of the leases.

Total rental expense for all operating leases, net of sublease rentals, was $10,988,000 for 19X9 and $10,225,000 for 19X8. Contingent rentals, sublease rentals, and rental payments under leases with terms of a month or less that were not renewed are not disclosed separately since they are immaterial.

The above minimum rental payments and total rental expense do not include landing fees, which amounted to $11,709,000 for 19X9 and $10,335,000 for 19X8.

3. Long-Term Debt

Long-term debt is summarized as follows.

	19X9	*19X8*
	(in thousands)	
Notes payable to banks, ¼ to ¾ over prime and 8% to 9%, payable in varying installments to 19X9	$ 96,811	$119,644
Notes payable to institutional lenders, 5¼% to 10½%, payable to 20X1, of which $11,786,000 is secured by real property	48,258	53,847
Notes payable, other, 1% over prime, payable to 19X7	75,335	93,953
Total long-term debt	220,404	267,444
Less current installments of long-term debt	45,859	38,153
Net long-term debt	$174,545	$229,291

The aggregate amounts of principal maturities of debt outstanding at December 31, 19X9, for the five subsequent years are as follows.

19X0	$45,859,000
19X1	35,757,000
19X2	36,991,000
19X3	37,496,000
19X4	10,908,000

4. Income Taxes

Income tax expense is comprised as follows.

	19X9	*19X8*
	(in thousands)	
Current income taxes		
Federal	—	—
State	$ 753	$ 570
Total current income taxes	753	570
Deferred income taxes		
Gross deferred taxes arising from		
Accelerated depreciation	9,605	8,572
Other timing differences	3,374	(4,145)
Total gross deferred taxes	12,979	4,427
Investment tax credits applied	12,776	4,427
Net deferred income taxes—state	203	—
Total current and deferred income taxes	$ 956	$ 570

Taxes are deferred as shown above because, under the applicable tax statutes and regulations, some items of income and expense are not recognized in the same years for tax reporting and financial statement purposes.

The difference between income tax expense and that derived by applying the statutory federal income tax rate to earnings before income taxes is shown below.

	19X9	*19X8*
	(in thousands)	
Computed taxes at statutory rate	$ 12,767	$ 4,693
Increases (decreases) in computed taxes resulting from		
Investment tax credits applied	(12,776)	(4,427)
Other items, individually insignificant	965	304
	$ 956	$ 570

Investment tax credits that have been recognized for financial statement purposes but not utilized on tax returns at December 31, 19X9, amounted to approximately $44,700,000 and expire as follows.

19X0	$ 8,300,000
19X1	10,500,000
19X2	9,200,000
19X3	13,600,000
19X4	1,000,000
19X5	2,100,000

When the tax benefit of such credits is subsequently realized as a reduction of federal income taxes payable, an equivalent amount of deferred tax credits will be reinstated.

5. Contingent Liabilities

The company is a defendant in several legal actions regarding environmental issues (primarily noise), alleged employee discrimination, and other matters.

Because of the unsettled status of the law involved in many of the areas, the outcome of these actions is difficult to predict. It is, however, the present opinion of management, based on advice from legal counsel, that final disposition of these matters will have no material adverse effect on the company's financial statements.

6. Public Service Revenues

As a local service carrier, the company receives public service revenues for serving small and intermediate-sized communities that do not generate sufficient traffic to fully support profitable air service. The amount of such payments is determined by the CAB on the basis of its evaluation of the amount of revenue needed to meet operating expenses and to provide a reasonable return on investment with respect to eligible routes. This amount is reduced by a portion of the company's earnings on routes not eligible for public service revenue when these earnings exceed the prescribed maximum return on investment set by the CAB.

Glossary

airbill. The nonnegotiable shipping document used by domestic air carriers as evidence of an air freight shipment. The document contains shipping instructions, commodity descriptions, and transportation charges applicable to the freight shipped. Sometimes the term is used interchangeably with *air waybill*; however, these terms are correctly synonymous only when the domestic airbill meets the uniformity requirements of the air waybill set by the Warsaw Convention. (See *air waybill.*)

air cargo. In the United States, the total volume of freight, mail, and express traffic that is transported by air. U.S. air cargo consists of the following classes of service: priority mail (airmail and air parcel post), nonpriority mail (airlift of first-class mail on a space available basis), foreign mail (mail destined to or from foreign countries), air express (priority movement of packages, generally under fifty pounds), and air freight (the airlift of commodities of all kinds).

air carrier. Any person who undertakes, whether directly or indirectly or by a lease or any other arrangement, to engage in air transportation.

aircraft miles flown. The miles (computed in airport-to-airport distances) for each flight stage actually completed, whether or not performed in accordance with the scheduled pattern. For this purpose, operation to a flag stop is a stage completed, even though a landing is not actually made. In cases in which the interairport distances are inapplicable, aircraft miles flown are determined by multiplying the normal cruising speed for the aircraft type by the airborne hours.

aircraft servicing expense. Compensation of ground personnel and other expenses incurred on the ground incident to the protection and control of the in-flight movement of the aircraft; scheduling or preparation of aircraft operational crews for flight

assignment; landing and parking of aircraft; visual inspection; routing, checking, servicing, and fueling of aircraft; and other expenses incurred on the ground incident to readying for aircraft arrival and takeoff.

airframe. The structure of an aircraft, excluding engines and accessories. The principal parts of the airframe of an airplane include the fuselage (the body), wings, empennage (the assembly of stabilizing and control surfaces at the tail), landing gear, and nacelles or pods (engine housings).

air freight forwarder. Any indirect air carrier that, in the ordinary and usual course of its undertaking, (1) assembles and consolidates, or provides for assembling and consolidating of, property for shipment by air, or performs or provides for the performance of break-bulk and distributing operations for consolidated shipments, and (2) is responsible for the transportation of property from the point of receipt to the point of destination and uses, for the whole or any part of the transportation, the services of a direct air carrier.

air traffic liability. The value of air transportation services sold but as yet unused by the passenger, including sales for air transportation to be provided by the reporting air carrier and air transportation to be provided by another air carrier for whom sales were made. This is sometimes referred to as *unearned transportation revenue.*

air waybill. The nonnegotiable uniform shipping document used in air freight transportation (especially in international transportation) by air carriers as evidence of a shipment. The document contains shipping instructions, commodity description, and transportation charged applicable to the freight shipped. While the document is standardized for international shipments by the Warsaw Convention, the term is sometimes used interchangeably with *airbill*—a largely domestic document that may or may not have uniformity within a country. (See *airbill.*)

airworthiness. The ability of a particular aircraft or component part to perform its function satisfactorily through a range of operations determined by the Federal Aviation Administration.

available load. The maximum salable load. It is the allowable gross weight, less the empty weight, less all justifiable aircraft

equipment, and less the operating load (consisting of minimum fuel load, oil, flight crew, steward's supplies, etc.). For passenger aircraft, the available load must not exceed the weight of the maximum number of passengers who can be accommodated in the seats installed in the aircraft, plus the weight of the traffic that can be accommodated in the cargo space.

available seat miles (ASMs). The aircraft miles flown on each flight segment multiplied by the number of seats available for revenue use on that segment.

available seats. Installed seats in an aircraft (including seats in lounges), exclusive of any seats not offered for sale to the public by the carrier, provided that in no instance shall any seat sold be excluded from the count of available seats.

available ton miles (ATMs). The aircraft miles flown on each flight segment multiplied by the number of tons available for the transportation of passengers, freight, mail, and express for revenue use on that segment.

average flight segment length. The average distance in statute miles covered by an aircraft in revenue service from takeoff to landing.

block-to-block aircraft hours. The hours from the moment an aircraft first moves under its own power (including taxi time before takeoff and after landing) for purposes of flight until it comes to rest at the next point of landing. This term is sometimes referred to as *ramp-to-ramp aircraft hours.*

bonded fuel. Aircraft fuel imported into the United States that is destined for use only in international operations and upon which federal taxes are not levied. Such fuel must be segregated from fuel used in domestic operations and stored under a carrier's or supplier's bond that the tax-exempt fuel will be used only in international operations.

break-even load factor. The load factor in scheduled revenue service that is required for scheduled passenger revenue less passenger traffic expense to equal passenger capacity expense. (The split into types of cost is not strictly "fixed" versus "variable" costs as those terms are used in accounting literature. See *traffic expense* and *capacity expense.*)

built-in overhaul. The portion of the cost of flight equipment that represents the estimated cost of the initial overhaul of the flight equipment.

capacity expense. Expense related to the provision of available aircraft capacity, regardless of the degree to which that capacity is utilized.

cargo ton mile (CTM). One ton of cargo (freight, express, and mail) transported one mile.

certificated point. A city, place, or population center authorized to receive scheduled air service under a certificate of public convenience and necessity or under an exemption issued to an air carrier.

certificated route air carrier. One of a class of air carriers holding certificates of public convenience and necessity issued by the CAB authorizing the performance of scheduled air transportation over specified routes and a limited amount of nonscheduled operation. This general carrier grouping includes all-purpose carriers and all-cargo carriers.

certificate of public convenience and necessity. A certificate issued to an air carrier by the Civil Aeronautics Board, under section 401 of the act, authorizing the carrier to engage in air transportation.

commission override. The payment by direct air carriers to travel agents of a higher amount of commission than that specified in applicable ATC or IATA resolutions or public announcements of air carriers.

conjunction ticket. Two or more tickets concurrently issued to a passenger that together constitute a single contract of carriage.

coupon. See *flight coupon* and *ticket.*

deplaned traffic. A count of the number of passengers exiting and tons of cargo being unloaded from an aircraft. For this purpose, passengers and cargo on aircraft leaving a carrier's system on interchange flights are considered to be deplaning at the interchange point; and passengers and cargo moving from one operation to another operation of the same carrier, for which separate reports are required by the Civil Aeronautics Board, are considered to be deplaning at the junction point.

developmental and preoperating costs. Costs accumulated and deferred in connection with the alteration of operational characteristics, such as the development and preparation for operation of new routes and the integration of new types of aircraft or services.

domestic trunk. Domestic operation of the domestic trunk carriers. This group of carriers operates primarily within and among the fifty U.S. states over routes serving primarily the larger communities.

dry lease. An aircraft lease in which the lessor provides only the aircraft.

economy class. Transport service established for the carriage of passengers at fares and quality of service below that of coach service.

enplaned traffic. A count of the number of passengers boarding and tons of cargo being loaded on an aircraft. For this purpose, passengers and cargo on aircraft entering a carrier's system on interchange flights are considered to be enplaning at the interchange point; passengers and cargo moving from one operation to another operation of the same carrier, for which separate reports are required by the Civil Aeronautics Board, are considered to be enplaning at the junction point.

expendable parts. Parts that are ordinarily used up and replaced with new parts, as opposed to those parts that are capable of being used over and over after being refurbished (*rotable flight equipment*).

fare. The amount per passenger or group of persons stated in the applicable tariff for the transportation, including baggage, unless otherwise specified.

fare dilution. The difference between the revenue that should be received for the carriage of traffic at published full fares and the revenue that is actually received for that carriage. The fare dilution reflects the effect of discount, promotional, and other less-than-full fares on revenues.

fare ladder (fare calculation column). The "for issuing office only" box of a ticket containing the individual fares for each portion of a passenger's itinerary, the sum of which constitutes the passenger's total fare for the transportation authorized by the ticket.

first class. Premium quality services provided to passengers.

fixed-base operator. One who conducts a business operation at an airport or airfield, involving the selling or servicing of aircraft, flying instructions, charter flights, etc.

flag stop. A point on an air carrier's certificated route that is scheduled to be served only when traffic is to be picked up or discharged.

flight coupon. A coupon in a ticket issued for transportation that contains the itinerary of the passenger(s) but is valid only for carriage between the passenger's point of enplanement and deplanement on a single flight, as noted on the coupon. It also includes the class of service, stopover code, carrier, date of travel, flight number, and applicable fee. (See *ticket.*)

flight equipment. Airframe, aircraft engines, aircraft propellers, aircraft communications and navigational equipment, miscellaneous equipment used in the operation of the aircraft, and improvements to leased flight equipment.

flight equipment expendable parts. Flight equipment replacement parts of a type recurrently expended and replaced rather than repaired for reuse.

group depreciation. A plan under which (1) depreciation is based on the application of a single depreciation rate to the total book cost of all property included in a given depreciable property and equipment account or class, despite differences in service life of individual items of property and equipment, (2) the full original cost, less any salvage realized, of a retired item of depreciable property or equipment is charged to the allowance for depreciation regardless of the age of the item, and (3) no gain or loss is recognized on the retirement of individual items.

group ticket. A single ticket valid for the transportation of two or more passengers over the same itinerary.

hours per aircraft per day— carrier's equipment, revenue. Average hours of productive use per day in revenue service of a reporting carrier's equipment, determined by dividing (1) aircraft days assigned to the service carrier's equipment into (2) revenue aircraft hours minus revenue hours on another carrier's interchange equipment plus total hours by others on the carrier's interchange equipment.

hours per aircraft per day— carrier's routes, revenue. Average hours of productive use per day in revenue service on a reporting carrier's routes, determined by dividing aircraft days assigned to the service carrier's routes into revenue aircraft hours.

interchange agreement. An agreement under which aircraft of one air carrier are used to provide one-plane service over its own routes and the routes of other air carriers.

joint fare. A fare, published as a single factor, that applies to transportation over the joint lines or routes of two or more carriers and is made and published by arrangements or agreement among the carriers, evidenced by concurrence or power of attorney. (See *local fare.*)

joint rate. A rate, published as a single factor, that applies to transportation over the lines or routes of two or more carriers and is made and published by arrangement or agreement among the carriers, evidenced by concurrence or power of attorney.

landing fees. Fees paid to an airport or other governmental authority for each aircraft landing. Usually, the fees are levied on the weight of the aircraft that has landed.

load factor. The percentage of revenue passenger miles to available seat miles in revenue passenger service, representing the proportion of aircraft seating capacity that is actually utilized. For cargo, the term refers to the percentage of cargo revenue ton miles to available cargo ton miles.

local fare. A fare that applies to transportation over the lines or routes of one carrier only. (See *joint fare.*)

local service carriers. Certificated domestic route air carriers operating routes of lesser density between smaller traffic centers and between those centers and principal centers.

mail revenue ton mile. All of the priority U.S. mail, nonpriority U.S. mail, and foreign mail times the miles transported in revenue service.

mail ton mile. One ton of U.S. and/or foreign mail transported one mile.

nonoperating property and equipment—net. Costs, less related accumulated depreciation or amortization, of property and

equipment (1) assigned to other than air transportation and its incidental services but not accounted for within a nontransport division and (2) held for future use.

nonrevenue traffic. Passengers and cargo transported by air for which no remuneration or token service charges are received by the air carrier. Airline employees, officers, and directors or other persons, except for ministers of religion, who are traveling under reduced-rate transportation authorized by section 403(b) of the Federal Aviation Act and part 223 of the board's economic regulations, as well as travel agents, cargo agents, and tour conductors traveling at reduced fares, are also considered nonrevenue traffic.

oversale (overbooking). The sale of (or, in the case of overbooking, the acceptance of reservations for) more space (passenger seats) than is actually available on a flight. A practice that is used sometimes by the air carriers as an allowance for that historical percentage of passengers who fail, for some reason, to use the space they have reserved on a flight. In those cases in which the actual number of passengers with purchased tickets exceeds the available space for a flight, the carrier is liable for denied boarding compensation to those passengers not accommodated on the flight or on comparable air transportation.

passenger mile. One passenger transported one mile. Passenger miles are computed by multiplying the aircraft miles flown on each flight stage by the number of passengers transported on that stage.

passenger service expense. All expenses chargeable directly to activities contributing to the comfort, safety, and convenience of passengers while in flight and when flights are interrupted.

prepaid ticket advice (PTA). A form used by air carriers to indicate that payment for air transportation has been made in a different place than where the transportation commences.

proportional rate. A rate that may be used only to construct a combination rate on traffic that (1) originates at a point beyond the point from which the proportional rate applies, (2) is destined to a point beyond the point to which the proportional rate applies, or (3) both originates at a point specified in (1) and is destined to a point specified in (2).

proration. Division of a joint fare among the concerned carriers on an agreed basis or the relationship of the local fare of each carrier to the total combination of local fares.

ramp-to-ramp aircraft hours. See *block-to-block aircraft hours.*

rate. The amount per unit stated in the applicable tariff for the transportation of property.

reporting unit. The different operations, such as domestic and international and territorial operations, that may be conducted by a carrier, for which separate detail data are reported.

revenue passenger. One fare-paying passenger transported by the carrier.

revenue passenger load factor. The percentage of seating capacity that is actually sold and utilized, computed by dividing revenue passenger miles flown by available seat miles flown in scheduled revenue passenger service.

revenue passenger mile (RPM). One fare-paying passenger transported one mile. Revenue passenger miles are computed by multiplying the number of revenue passengers by the miles that they are flown.

revenue ton mile. One ton of revenue traffic transported one statute mile. Revenue ton miles are computed by multiplying tons of revenue traffic (passengers, freight, mail, and express) by the miles that this traffic is flown.

revenue ton mile load factor (overall revenue load factor and ton load factor). The percentage of total capacity available for passengers, freight, and mail that is actually sold and utilized, computed by dividing total revenue ton miles actually flown by total available ton miles.

revenue traffic. Passengers and cargo transported by air for which remuneration is received by the air carrier. Airline employees, officers, and directors or other persons, except ministers of religion, who are traveling under reduced-rate transportation authorized by section 403(b) of the Federal Aviation Act and part 223 of the board's economic regulations; travel agents; cargo agents; tour conductors traveling at reduced fares; and other passengers and cargo carried for token service charges are not considered revenue traffic.

rotable flight equipment. Rotable parts are normally repaired and reused, as opposed to those parts that are consumed in the operations (*expendable parts*).

scheduled departure. A takeoff scheduled at an airport, as set forth in published schedules.

seat mile. One passenger seat transported one statute mile. This statistic is used to report available passenger-carrying capacity on an aircraft; however, when the seat is occupied by a revenue passenger, the measurement unit is referred to as a revenue passenger mile (RPM).

spare parts. Parts, appurtenances, and accessories of aircraft (other than aircraft engines and propellers), of aircraft engines (other than propellers), of propellers, or of appliances that are maintained for installation or use in an aircraft, aircraft engine, propeller, or appliance but that are not yet installed or attached.

subsidy. Revenues received from the U.S. government as direct grants for the transportation of mail, for the performance of guaranteed essential air service to small communities, and for losses incurred in forced service. The sources of authority for payment are found in section 406(b), section 419(a)(5) and (b)(6), and section 419(a)(7)(B) of the Federal Aviation Act. This includes payments for mail subsidy but does not include revenues from the carriage of mail at service rates or the performance of other contractual services for the government.

tariff. The notice of fares and rates applicable to the transportation of persons or property and the rules relating to or affecting such fares and rates of transportation.

through fare. The total fare from point of origin to destination. It may be a local fare, a joint fare, or a combination of separately established fares.

ticket. A printed document that serves as evidence of payment of the fare for air transportation. Generally, this takes the form of the standard Air Traffic Conference ticket, which is composed of an auditor's coupon, agent's coupon, flight coupon(s), and passenger's coupon. It authorizes carriage between the points and via the routing indicated and also shows the passenger's name, class of service, carrier(s), flight number(s), dates of travel, and all conditions of the contract of carriage.

ticket liability. The value of transportation sold but unremitted for travel supplied by other carriers.

ton mile. One ton transported one mile. Ton miles are computed by multiplying the aircraft miles flown on each flight stage by the number of tons transported on that stage.

traffic expense. Expense that relates to, and varies with, the traffic (passenger and/or cargo) actually transported. It includes such cost elements as traffic servicing expenses, reservations and sales expense, and advertising and publicity expense.

traffic servicing expense. Compensation of ground personnel and other expenses incurred on the ground incident to handling traffic of all types and classes on the ground subsequent to the issuance of documents establishing the air carrier's responsibility to provide air transportation. It includes expenses attributable to the operation of air traffic offices but not costs of reservation sales centers. It also includes expenses of enplaning and deplaning traffic.

travel agent commission. The payment by airlines to a travel agent of specified amounts of money in return for the agent's sales of air transportation. Travel agents' commissions usually are charged to expense and paid by each carrier as a percentage of the value of the air transportation sold on that air carrier.

unearned transportation revenue. See *air traffic liability.*

wet lease. An aircraft lease in which the lessor provides both the aircraft and the crew.

yield. The average revenue per unit of traffic carried in revenue service. Usually, yield is calculated as average revenue per revenue passenger mile, or cents per RPM. For cargo, it is calculated as average revenue per cargo revenue per ton mile, or cents per CTM.